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THE PSYCHIATRIC QUARTERLY

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THE PSYCHIATRIC QUARTERLY

ANNOUNCEMENT

With this number THE PSYCHIATRIC QUARTERLY makes its first appearance on the psychiatric stage; it succeeds the State Hospital Quarterly which has appeared regularly since November, 1915. The change in the publication is due in part to the reorganization of the State departments whereby a new Department of Mental Hygiene has been established to carry on the work previously done by the State Hospital Commission, and the State Commission for Mental Defectives, together with other new functions. The enlargement of the Department necessitated an enlargement of the scope of its official organ as well as the adoption of a more inclusive name.

The PSYCHIATRIC QUARTERLY will deal with the whole range of mental disease, mental defect, epilepsy and allied disorders; also with the problems of hospital administration, nursing, occupational therapy, mental clinics, social service, prophylaxis and other mental hygiene activities. Appropriate articles of merit from authors in any part of the country will be welcomed but preference naturally will be given to contributions from psychiatrists in the New York State service.

The minutes of the Quarterly Conference, local news of the State hospitals and institutions and other items of local or transitory interest will hereafter be published in a separate pamphlet to be known as the Supplement to the PSYCHIATRIC QUARTERLY.

The annual subscription price of the QUARTERLY will remain at \$2.00, while that of the Supplement will be \$1.00.

THE EDITORS.

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ANALYTICAL TREATMENT OF A NEUROTIC REACTION. A STUDY IN SYMBOLISM

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In the practice of psychoanalysis one encounters a wide variety of pathogenic mental reactions, some of which respond favorably to psychoanalytic treatment, while others at the opposite pole are almost entirely uninfluenced. Between these extremes are all gradations of responses; it is with those patients, who occupy what in the present light of enquiry we may term the highly resistive realm, that we are here particularly concerned. We who deal especially with well established psychotic reactions are able to view the patients' conflicts in their nudity very early in the development of their illness. The conflict is laid bare, the archaic and infantile mechanisms are obvious, yet, no matter how much we may possess of the total life history of the patient, we cannot employ the data in the average case in a therapeutic sense. At first glance we are inclined to believe that the same mechanisms that operate in the complete exposé of the libidinal strivings play an important rôle in what is commonly called resistance. The basis for this is probably to be found in the consideration that there are all variations of dissociation of affect and ideational content, and that therapeutic efficacy is in a large measure dependent upon the degree of dissociation; the chasm, however, does not in itself comprise the sole factor, for it not infrequently happens that an especially wide gap, separating adequate emotional responses from thought content, may eventually be closed in, thereby re-establishing coordinate functioning. If, however, the physician is unable to accomplish this bridging in a satisfactory manner, little improvement in the patient's condition can be hoped for. When a definite splitting has taken place as, for instance, that which occurs in the group classed as schizophrenia, the problem, as we now understand it, is first to reduce the symbolizations to their real meanings and then to cause a fusion of the latter with their proper affective values. When these therapeutic mechanisms are effectively accomplished, the patient can be said to have recovered.

In the schizophrenic group under good cooperation one is generally able to trace the successive steps through which the various components of the psychotic syndrome have passed; the complete history may be unravelled; and still the analyst may be quite frustrated in his efforts to effect a reconciliation of affect and

ideational content. In literature cases have been recorded* in which recovery has been brought about in the face of pronounced dissociation. But, little is understood of the forces that operate in the recovery. Kempf's suggestion, viz., that therapeutic adequacy in schizophrenia is largely dependent upon altruistic transference and the spontaneous wish for insight seems to comprise the most favorable explanation yet advanced.

In psychoanalysis the term transference connotes the capacity of the subject to project his deeply rooted (unconscious) libidinal strivings upon the analyst. The latter thus becomes the imago, by which the unconscious yearnings attain renewal and perpetuation. Transference is, therefore, a resultant of unconscious forces. And resistance has a similar origin. When the analyst strives to lead the libido into consciousness and to unite it with reality, the factors that were responsible for the inversion of the libido come into play as resistance.

There is another source of resistance, one that is built up in consciousness. Both the conscious and unconscious tend to preserve the integrity of the unconscious libido and its constellations. The conscious resistance comprises a defense against the intrusion of reality into the unconscious realm, that harbors the preferred complexes. Speaking of the relationship of transference to resistance, Jelliffe says,* "These relations take the direction of the situation in which all conflicts must be fought out in the territory of the transference, and the transference appears to be the strongest weapon of the resistance, while the intensity and persistence of the transference are effects and expressions of the resistance. The mechanism of the transference is adjusted through leading it back to the preparedness of the libido which has remained in possession of infantile images; the explanation of its rôle in the treatment is successful only if one enters into its relations to the resistance."

Transference and resistance may exist "at the same time toward the same person"* Bleuler terms this coexistence "ambivalence." In borderland psychopathological states both may be strikingly prominent. By borderland we refer here to that large group of psychoneurotic individuals, who possess moderate yet unmistakable evidence of "splitting" of the psyche. We feel that the study of this group might throw some light upon the mechanism operating

* Kempf, Edward J., *The Psychoanalytic Treatment of Dementia Præcox. Report of a Case. Psychoanalytic Review*, Vol. 6, p. 15.

* *Technique of Psychoanalysis, Nervous and Mental Diseases. Monograph Series No. 26: p. 90.*

* *Ibid.*

in the more pronounced schizophrenic states, that we might gain a more comprehensible understanding of the factors tending to induce what is commonly referred to as "lack of insight."

The Case of Henry. A young man, Henry by name, had been troubled from early youth with the fear of death; the fear was prominent in childhood and became intensely accentuated at and beyond the period of puberty, being manifested chiefly in the form of anxiety states during which he felt that complete collapse (death) was imminent. Over a period of years he visited a score of physicians, each of whom made efforts to a greater or lesser extent (more frequently the latter) to solve the nature of his difficulties. From a thorough survey of his attitude toward the host of physicians we could see two outstanding characteristics. In the first place, Henry craved the attention of physicians; during the past 12 years the physician has represented to him the source of omnipotence, the means by which his life could be perpetuated; he had such an undue attachment to members of the medical profession, that the thought of ever encountering a situation in which a physician was not immediately available gave rise to anxiety in a pronounced form. Whenever he was in a distant part of the town in which he did not know any physician, he would stand in front of one's office, imagining the physician was assuring him of the absolute improbability of the panic resulting in death. Henry carried the attachment to the physician to fetish worship, for he always had in his possession some object identified with a physician in particular or with the medical world in general; and the object comprised nothing more or less to Henry than the reincarnation of the medical man's help. He extended the worship into almost every conceivable item in the environment, thus enabling him at a moment's notice to summon the power of the physician to protect him; in Henry's early manhood only the physician himself could wield the magic force over him, but as time passed Henry was embarrassed by the criticism of others that he was totally under the solicitude of doctors, and he therefore began to devise means by which his absolute dependence would be less recognizable. Hence, he eventually acquired a legion of symbolisms; he could almost always find someone who resembled in some slight way at least any one of the many physicians who had "treated" him; a scarf, hair color, voice, carriage, a gesture, etc., etc., ultimately and with much ease were empowered with the attributes of the object with which he originally identified himself. When, for instance, he felt anxious while in a certain neighborhood, he was able at a moment's notice to invoke

the aid of a wide variety of symbols, thereby investing himself almost totally with alleged healing influences. A house of a certain architecture, he imagined, was like that occupied by a physician who had once "assured" him; hence, the house came to have the therapeutic value of the physician; a sign, not necessarily of a physician, placed in a window had the same worth; later, any sign, denoting any calling, a sign of any size, on the ground floor or near the roof, was unqualifiedly endowed with healing power. Again, one of his physicians owned an automobile of a special make; when he left that physician, the same car under any other circumstances sufficed to allay the full development of the anxiety state; finally, all automobiles had the same soothing influence. And the facility of identification went on *ad libidum*.

Obviously, Henry was utilizing one of the earliest infantile mental mechanisms for the attainment of his ends. By a simple gesture he was able to give to any object any power that he desired. A scarf became a man; more than that it was by magic transformed into a most powerful influence, one that could ward off death; just, as, for instance, a child's toy can respond to any wish of the infantile imaginings. The wish takes priority over everything else.

Before we begin to analyze the connotations of the wish, we want to call attention to another, and contrary, attitude of Henry to the alleged greatness of the physician. We must bear in mind that the physician has been to him only what other environmental factors have been, namely, a symbol by which he could keep alive his deeply-rooted phantasy life. Whenever Henry found an object that might act as a suitable resting place for the complexes that he did not care to exhibit on his own person, he was ready to adore the complexes, as if they were not his own. That this was true was evident to the majority of physicians (of psychiatric training) who saw him, because Henry loved all of them until they began to enquire into the cause of the anxiety states, whereon he rapidly withdrew from treatment. The present physician is the only one who has successfully penetrated his bulwark of symbols. Prior to the beginning of the present investigation, he remained longest with the doctor who prescribed for the symbols and he avoided the doctor who prescribed for the meaning behind the symbols. In this respect he resembled to a large extent the patient with schizophrenic mechanisms, particularly because he failed to recognize the simplest motives that controlled his behavior, even after a thorough analysis gave unmistakable evidence of his underlying trends. He has contributed a large number of signs that point to the unwillingness to relinquish the infantile attachments.

This phase comprises the second part of his ambivalent attitude toward the physician. The fact that he has had such a large number of physicians, "none of whom has ever understood me," is a compliment to the untiring efforts he has engaged in to prevent the release of the infantile fixation. One cannot believe that "the horrible fear of death" from which, he alleges, he wishes to be free is not after all as troublesome to him as is the relinquishment of the infantile mode of reaction and the adoption of healthy adult behavior, that would necessarily be the result of the abandonment of the infantilism. As long as he could engage the services of physicians who assured him that the fear of death could not in itself induce death, or, in other words, as long as he could survive and still retain the fear, which shorn of its symbolism meant the perpetuation of infantile life, he was as content as could be expected. There is much evidence to show how averse he was to the solution of the symbolism.

For a period of almost two years, while he was under treatment of the present writer, he was so highly resistive that he seldom acquainted the physician with any of his rich dreams life and associational material was revealed in meagre, scattered bits. He repeatedly complained that he was not given the "assurance" that other physicians gave, and he laid special stress on the symbolism. For months treatment remained on an almost purely impersonal basis, for it took that time to convince him of the simplest truths regarding the general employment of symbolic behavior; it is believed that he now understands the universality of symbolism, but, he fails to make any practical application of the knowledge to his own condition. The failure is not due to intelligence itself, for he has an intelligence quotient of 120; moreover, he is a college graduate and has successfully met educational problems of a relatively high order. The difficulty has a *wish-fulfilling* basis, which is so securely grounded that after more than three years of analysis there still remains as large a gap between the knowledge of himself and the dynamic application of it to his own problems as there was at the beginning. In this sense, at least, he is not at all unlike the schizophrenic patient, about whom we know a great deal, but into whom we are as yet powerless to instill insight.

The wish to retain the infantile union has often been corroborated. Eight years ago he wrote to one of his physicians as follows: "I wish you would have pity toward me, the pity of a father toward his child. How I wish I could feel as I used to when he talked to me! Your kindness and solicitude bolstered me up. I

need one who can talk to me as a good father. If you could only be near me tonight, I would lay my head on you and rest, rest, rest, rest. Pardon me, for I am such a weakling." Eight years later to the present physician he said, he wanted (at the time the letter was written) "the peaceful comfort of just resting in the arms of someone strong and protecting." But, he did not want any investigation made into the nature of his illness. He, therefore, passed from one bosom to another, through a multitude of motherly physicians. And the present physician, who acted essentially in a similar capacity, while at the same time being able gradually to link the symbolic behavior with the infantile past, has only recently and indirectly elevated him to the stage of psychological creeping.

At one time during the course of the analysis, when it appeared that he would finally acknowledge a relationship between the symptoms of the neurosis and the infantile unconscious, he resorted to several forms of resistances, the totality of which preserved the integrity of the unconscious. He dreamed that the physician had died. He later said that if the physician died the analysis would cease. Throughout this period of analysis he was very unwilling to continue, maintaining that psychoanalysis was claimed by many to be a fraud and that its postulations were entirely unwarranted. He took the occasion to gather all the material he could to dispute the efficacy of psychological therapy. Indeed, his fervor comprised for a time a new neurosis, through which he gained temporary relief from the old. But it was discouraged, because it was not the type of superimposed neurosis that leads to healthy adaptation.

He gave way (in a dream) to his resistances, having been willing "to try the treatment to see if it was any good." The dream was this: "There was a rather mysterious gentleman (a physician presumably), who made me think he was one of those who advertise in magazines. I said to him, 'I'd like to be your assistant; I've always wanted to work with one like you.' It seemed, though, that I had in mind a curiosity to assure myself by first hand knowledge of the absolute truth that such persons are quacks." Henry granted after much deliberation that he held absolutely no brief for psychoanalysis, that he maintained a categorical denial of the value of the practice.

The same trend was present in another dream. "I was riding on a trolley; I had a book, seemingly a text-book, and it was opened at a page on which was described the functioning of the brain. I pulled down the window shade, because the sun was shining on the book. Naturally the type became indistinct, because the light was

shut out." One of Henry's severest tasks, and one from which he usually shrank, was trolley riding. He felt comfortable in the dream; hence, he was well, he said, because he has often repeated that if he could only ride in peace he would be well. Moreover, he had a text-book. The dream occurred shortly after he had been advised by one of his professors that if he concentrated on study he would become well. He was concentrating in the dream; therefore, he was well. But, the text was on the brain and he "shut the light out." In his free associations he pointed out how stubborn he had been to all efforts at understanding his own "brain" functioning. Moreover, he has insisted that the fear can be removed without any probing into his mental (brain) life; and the conscious wish is easily attained in the dream.

One day a physician had told him that epileptic patients do not care to get well, because their unconscious wish to retain the infantile associations assumes priority over the demands of reality; the night of that day Henry dreamed that he had an epileptic convulsion during which "I was striving to overcome my unconsciousness, but I was totally helpless. Surprising enough I was not scared; in fact, I seemed to be at ease." Like many other patients of his type, Henry has often wished that he could ascribe his mental illness to some definite organic changes; during the first few years of the neurosis he begged physicians to examine every organ, especially the heart, for he had invested one organ after another with the libido, that genuinely belonged to the infantile ideational sphere; and he remained with those physicians who alleged to have found an organic cause; temporary abatement of the anxiety was, of course, the result, not of the drugs administered but of the support he received in displacing the affect. A close analogy is seen in the dream material; he was at ease in the knowledge that he had epilepsy. His dream life, in other words, operated to disguise the origin of the neurosis.

Henry's formula for the retention of his neurosis comprised in the main his refusal to reveal the significance of the symbols. After several interviews during which the physician had cited a wealth of evidence taken from Henry's own case material, to show that he was still unduly attached to the mother imago, he refused to acknowledge that his interests in his mother had any special significance. At this time he dreamed that "a doctor had promised to cure me if I revealed all I knew, but he failed." In his associations Henry claimed, as he had frequently done before, that even if his entire psychical career were laid bare, the physician would be

unable to establish any relationship between early experiences and symbolic representations. His resistances adopted that form of expression, because he had already given sufficient circumstantial evidence to warrant the truth of the relationship. The wish, however, to conceal the origin of the symbols (of the neurosis) interfered prominently with the progress of treatment. We were able to ascertain much more of his psychical life, only, though, with his reiterated insistence that there was no such mechanism as symbolic transformation.

While he was undergoing analysis at the hands of the writer, he regularly and clandestinely visited other physicians, who repeatedly "assured" him that he could not die of fright. Often the dream content was related to their comments. Thus: "I dreamed that Dr. X. and I were talking. He claimed with full certainty that I had nothing to fear, because emotional reactions themselves cannot produce death." In another dream with the same characters, the doctor agreed with Henry that prenatal influences determined his neurosis, and since that was the case, no one will ever be able to remove the cause. The dream material is in harmony with his oft-repeated allegation that he was born as an inferior individual and that the fear, being an outgrowth of the inferiority, is ineradicable. This assumption, of course, served only to fortify his hold on the infantile cravings.

At one time, when it seemed that he was at last about to concede a small point, which would have paved the way for acknowledgment on his part of a larger principle, he left the analyst with the following valedictory: "I'm at the end of the rope now; I can't do any more for myself and you can't do any more for me." He said that for several weeks he had been studying at the home of a physician; it was known that this physician had for a long time been the source of the "assurance" type of therapy. "There is no more hope for the analysis ever succeeding in making me any better; you have reached the limit of your help." He wanted to dictate the nature of the treatment; he rebuked the analyst for refusing to "assure" him; he scoffed at the analytic form of treatment. It was then explained why he had taken an attitude of repugnance, and the reasons therefor were made so obvious to him that silence was his only reply. Nevertheless, he remained away from the physician for several weeks. After his return he gradually revealed more for analysis.

So, amid such highly resistive factors as are indicated in the foregoing, the analyst was able to eke out a full analysis over a period of three years.

The multiple manifestations of the neurotic syndrome were traced to their original sources, yet at no time has he been willing to admit that any relationship existed between his past and the subsequently formed symbols, born of past experiences.

At an early age it was recognized that Henry was not growing up psychologically as well as his brothers and sisters had. He was ever at his mother's side, happy when she coddled him and whimpering when she was inattentive. In early childhood he merited the dubbing "mamma's boy," which he heard tauntingly hurled at him from all sides. His mother devised many plans with the object of encouraging him to detach himself from such infantile forms of behavior, but whenever attempts were made to carry out the plans, Henry developed fearful reactions, that could be alleviated only by the presence of his mother. She constantly advised ("assured") him that, when she was away, he could feel as secure as his brothers and sisters did, if only he would let himself acquire that feeling, but her advice was unavailing. In later childhood Henry feigned illness to invoke his mother's attention. He frequently alleged that he had heart trouble, as a form of rationalization that kept him indoors with her. He often complained of gastro-intestinal troubles, which, at first resulted in the fulfillment of his aim (mother attention or identification), but which later were determined to be simulated and were countered by punishment and inattention. In this mother-son situation there was not the mutual interest seen so frequently in other families; on the contrary, Henry's strivings to identify himself with the mother received successful recognition from her only through the period of early childhood; subsequently she used good judgment in the attempts to have him outgrow his infantile attitude toward her; she was well adjusted to her husband's life, and when he died (Henry was then six years old) she adapted herself well to the eldest son, who took the father's rôle in the conduct of home affairs. Seven years later, when Henry was 13 years old, she remarried; the second marriage has not been as happy as the first one was, which fact has been used by Henry as an excuse for the added attention that he has given her since the marriage.

He could not recall much of his attitude toward his father, save that in general they were passive to each other. In his youth Henry had invested his libido so completely in his mother that other members of the family were of little consequence to him. But, in late youth, when the eldest boy took priority in the mother's esteem, Henry was resentful. When his mother began the second courtship

(he was then almost 13 years old) Henry rebelled violently against the marriage. He begged his mother to remain single; he assured her of his undivided attention for the entire future; he pictured his future with her, with wealth and contentment; his ambition was to care for her, he told her; he expressed extreme antagonism toward his prospective step-father. But, his mother recognized the inadequacy of his claims and soon remarried. The marriage precipitated the expression of the genuine neurosis that he has been afflicted with for the past 13 years.

During the analysis Henry had reviewed his early attitude toward the members of his family, having given the material in the foregoing account. Although the situation has been repeatedly brought to his attention, he is still of the opinion that familial factors did not condition his psychic life in any way.

He devised two methods of approach to the solution of the mother problem. He planned to murder the step-father; that act would restore his mother to him. Also, he would study assiduously, become a professional man, rich and prominent, and would forever provide for her. This represents but a slightly modified Oedipus plot.

Henry had been coy and submissive before his mother remarried, but following her marriage his hatred against the step-father gave rise to thoughts of boldness. He began to play rough games, especially those that called for aggressiveness against a superior enemy. He became "captain" of the army of boys in the neighborhood and inflicted punishment upon his hostages. His ideal hero was Cæsar; he read profusely on Napoleon and often imagined himself as Napoleon. The fanciful life in the aggressive rôle was of short duration; later humbleness was substituted for aggression. "I gave up the fight because I decided that my mother could have left her husband if she cared to. After all there wasn't much difference in the way I fought in the house and in the street. It was all the same." The origin of the pugnacity was in the family circle.

He told his playmates of his plans to kill his step-father; he outlined the method of attack and in fancy completed the deed. He used to stalk about the house with a weapon in his pocket, bold, yet afraid to move; the opportunities for carrying out the plans were frequent, but none ever approached nearness. In fact, the motive was kept so secreted that no one in the family ever suspected it. "I hated my step-father, though he was always good to me. When my mother was happy with him, I was antagonistic to her. I didn't want her to like him." Shortly after they were married Henry

planned to become a merchant, earn a great deal of money, and support his mother in splendor. He complained that the step-father kept the family at a low economic level, although there was no proof for such an opinion. In fancy he had made himself greater than his step-father and had at the same time reduced his step-father to his own (Henry's) smallness. "I stayed awake nights, thinking of how I'd kill my step-father. I often dreamed I had killed him. Even when awake I imagined I was going into his room and was killing him. It was all so real. He wasn't a fit man to take my father's place. I could have done better than he, and I kept telling my mother so. When she remarried, all the castles I had built were shattered."

With even so vivid a description of the Oedipus complex he still maintains that his feelings towards his parents have always been natural. He is probably justified in the conclusion, but, it was pointed out to him, the means by which he handled the situation was at fault; that is, he developed a host of pathological symbols, through the medium of which he attempted to discharge the abnormally invested libido. It was this association in particular that he could never be made to see. "I could get rid of all these disagreeable things, if I had my mother all to myself. I've always enjoyed reading literature regarding happy family units. I thought I could conquer my troubles, if I were rich. I could buy a house and be boss; but, I wouldn't let my step-father live in it; we couldn't have harmony in the house with him there. I've always considered that, if my father had not died, I would have grown up just like him. He was the man I wanted to emulate." In face of such frank expressions he generally concluded with remarks similar to the following, which is an exact quotation taken from his recent utterances: "I'm able to summarize the meaning of the vast amount of experiences I've related to you, but I can't make them a part of myself, of my own life; I honestly say that they add to my intellectual store, but they don't relieve my symptoms. They are hypothetical forces, as far as I can understand them. You see them in one light, I see them in another. Truly, my symptoms were exaggerated when my mother remarried, but what of it, if it doesn't help me? The analysis has helped me to see my failures, my inferiorities; but the effect has been like that due to my brother's advice, when he told me I could overcome my difficulties in part, if I began to bank a few dollars."

Concomitant with the three years of thorough analysis, during which it was at all times evident that the link between his past expe-

riences and his neurotic symbolism could not be properly welded, the analyst was constantly encouraging him to enlarge his interests in extra-familial affairs. Very gradually he grew to be a little more at ease in the presence of others; he was taught to acquire friendships among his college associates; before this was accomplished he had allied himself with one or two men purely on a basis of his neurotic behavior, for the men "assured" him of the impossibility of death by fright and Henry could engage their services to take him home. At the present writing he has several friends, to none of whom he recounts the factors of his illness. Over the three-year period also he has been taught to participate in athletics and to attend functions of a social and intellectual character. The result is that he has outgrown in this indirect manner the infantile forms of behavior that previously predominated. To be sure, he has at the same time been influenced by his transference to the physician and by the various valuable features associated with the transference. Out of all this we feel that a general principle can be promulgated, viz., that *psychosynthesis is an invaluable adjunct to psychoanalysis*; that, furthermore, psychosynthesis may be employed to useful ends in the absence of the development of complete psychoanalytic insight from the standpoint of the patient.

That the various components of his symptomatological picture were directly related to the family background represented in the foregoing was substantiated by the rich and apparently intricate group of symptoms. The outstanding symptom, around which was built a legion of supportive sub-symptoms, was thanatophobia. When he was first seen by the physician the fear had attached itself most fervently to certain numbers and names. Early in his neurotic career he had heard that the number 90 symbolized fright. He explained that in lotto each number had a meaning. Subsequently anything that had to do with the number 90 induced the fear reaction in him. He meticulously avoided the possession of 90c, or \$1.90, \$2.90, etc. He quickly turned away from home addresses containing a 90; if there were any possible combination in which 90 could appear, he hastily withdrew from any association with it. The number 540, for example, could be explained by him as 90, by adding the first to digits; nor would he walk near or through 90th Street. A tailor once gave him a receipt numbered 90, whereupon Henry under the most intense anxiety finally succeeded in reclaiming the article he had left with the tailor. Moreover, all tailor shops thereafter instigated an attack of anxiety. While he was under treatment by the present writer, his brother bought him

a suit of clothes; Henry was not present at the time of the purchase, because he wished to avert a probable panicky experience. But, the fear was not to be cheated so easily. He found out that the suit cost \$17; in lotto, 17 is said to forebode a catastrophe; therefore, the suit was quickly disposed of. Seventeen brought to mind the number 77, symbolizing women's legs and this led directly to an interesting form of identification. He recalled vividly that he slept with his mother until he was seven years old and that a common pleasurable attitude was his embracing his mother's legs while he fell asleep.

The number 33 has likewise incurred aversion, because Christ died at 33, and more particularly, Henry's father, with whom he has constantly identified himself, died when he was 33 years old. He fears that he may die at 33. Hence, anything associated with 33 is apt to precipitate an anxiety state.

We do not intend at this time to review his homosexual manifestations, but, while speaking of numbers, we may mention that the number 69 has for some time been the occasion of much embarrassment on his part, because of its homosexual inference. Henry said that it a common symbol among homoerotics, who simultaneously practice fellatio, the arrangement of the digits representing the attitude assumed by the agents in such a practice.

There was one number, however, with which he had pleasant recollections—the number 5. This number sometimes magically dispelled the unfavorable influences of the digits referred to in the foregoing; "If I repeat the number 5, or, if I repeat an act five times, or do things by fives or multiples of five, I feel comfortable. When I scratch myself, for instance, I carry the motion through five times." He cited a multiplicity of instances to show how much he was influenced by the digit. If, in his professional capacity, he was asked to give a client four parts, he gave five; again, if six were called for, he argued that five would suffice. He did not know what the number symbolized in lotto; he cherished it because it was the date of his birth; furthermore, since late childhood he has known that one of his heroes was born on his, (Henry's) birthday. Likewise, one of his favorite novels had to do in part with his birth-month. He memorized that part of "The Betrothed" (by Manzoni) that recorded the escape of the beautiful woman from the tyrant and her return to her lover: "I was the lover; rather, I always imagined I was a romantic lover." In reality Henry has always been remarkably coy; he blushed profusely in the presence of women and he has yet to experience the feeling of ease in the com-

pany of women. "I loved the story by Manzoni. Even when my sickness was most disturbing, I could always get pleasure out of reading it. When I lay in bed as a cripple (psychological), I read and reread, until I had memorized, the passages dealing with the return of the lovers. The story represented life as I wanted it." This led him to recount the trend of another of his favorite books "Cuore" (Italian, meaning Heart). "There's always a crepe on everything I like; I like the sad, the melancholy. I like this book, because it portrays a boy's soul; it has been my Bible; I wanted to be the boy of the book; even at this age I try to imitate him. He was a bibliophile, so am I. It was all so sentimental; I loved to read of the boy, when he looked far and wide for his mother, finally locating her in a distant country. Its my Bible! But when he got to her, his heart was almost gone; it's a beautiful story, but the heart, well, that stirs up my own heart complaints." By this and by a number of other associations he linked the digit five with his birth, thence with his mother.

Henry's behavior was conditioned by some words. For instance, Thursday referred to Thor's Day, and Thor was the God of thunder and lightning; the latter produced great fear in him. So, each Thursday was uncomfortable to a greater or lesser degree. The first three letters of Friday were also the first three letters of the word "fright." Therefore, the two days were almost unbearable to him.

With the fear of numbers and of days, which alone curtailed his activities to a large extent, there were other fearful agents in the making, the total of which eventually cut off each and every environmental contact, leading to complete seclusion and hospitalization. For a long time the term "death by fright" was responsible for the acute precipitation of a state of panic. A thorough analysis of this situation revealed the fact that he searched carefully through every possible medium, until he encountered the "assurance" that fright could cause death. He wished to find the very feature that caused the anxiety. He would travel throughout the day from physician to physician, doubting those who advised against the possibility of death by fright, and eventually accepting the opinion of him, who admitted the probability in the slightest manner. He read technical and non-technical books, unmindful of any other parts except those that substantiated his version, that death by fright could occur. Having located the passages, he would thereafter religiously avoid anything connected with them. If the book were a novel, he discontinued interest in all novels; if a medical book, all

medical books were banned and so on, until all books held a horror to him. This behavior interfered greatly with his educational career, because he had to study from books and books symbolized fear and death. Furthermore, he often wrote references to articles on fear in his books; hence he could not carry the books to school, not to mention the impossibility of studying from them. Under the greatest of stress he managed finally to complete the college course, principally through the use of lectures. It must be understood that the development of the various neurotic elements was going on for years. On two occasions he became so fearful of every item in the environment that he was hospitalized; the first time for a few days when he was 17 years old, and again for nine months when he was 18 years old. But, from the age of 18 to 24 he lived in the hospital with the title of an employee, continuing his studies at the same time.

The fear of death was unusually closely associated with newspaper articles. He scanned the papers until he found the statement that fright caused death. He was not interested in news pertaining to anything else. If an article used the expression "probably death was due to fright," he searched further until the probability was removed. He did not seek articles that disputed such a claim. He has always doubted the "assurances" rendered by physicians. He at last relinquished interest in all newspapers, but he retained enough alliances with them to provoke the fear. He feared all newspaper buildings, rather, he feared the fear that they would incur; he avoided the neighborhoods in which newspapers were published. After he graduated from college he refused a good position, because from the place of work he could hear the machines in the newspaper building, which was located on another street. Furthermore, this same house of publication had been responsible more than once for statements regarding fright and death; and, as if these reasons were insufficient, he recalled a definite instance in which a boy was said by this newspaper to have died of fright in front of the very building in which he was to work. He did not accept the position in view of these relationships.

Viewed in its entirety, his sexual behavior was seen to have remained almost completely at the autoerotic level, with occasional transient interest in homoerotic and heteroerotic affairs. He developed a knowledge of his genitals at a very early age and engaged in masturbatory practices with boys and girls from early childhood. Also at an early age he enquired about the origin of babies, having been told that babies were born in women as a result of the union of

the male and female. That information was so embarrassing to him that he refused to accept it until he was almost 20 years old, in spite of the fact that in the meantime abundant evidence of its truth had come to him. The feeling of guilt that he had built up around his own Oedipus manifestations was accountable for the dominance of the wish not to understand the situation as it really was.

Adult masturbatory acts began at puberty. Again the feeling of guilt ran high; it was determined after final analysis that his adult sexual wants were directed to his mother and that he exhibited as strongly ambivalent tendencies in this component as he had in others. The sense of guilt was of such high proportions that he was unable to meet girls or women without profuse blushing. If, when he was in company with others, the term "leg" was mentioned, he flushed to a prominent extent, for directly he associated the thought with his mother's legs, to which he had displaced so much of his libido in early life. He used to lie in bed between her knees, generally embracing one or the other; he carried the practice until the 7th year and relinquished it with much resistance. Even today, the sight of a woman adjusting her garters reanimates the old situation and thus occasions the feeling of uneasiness and guilt.

Henry has never released any of his libido for heterosexual purposes. He has occasionally taken a young lady to the theater, the opera, etc., but only when the young lady has been put in the position in which out of sympathy for his coyness, she virtually invites herself. Sometimes a girl has shown a spontaneous interest in him; the further development of such a situation has been prevented through the excessive claims of unworthiness instituted by him.

He has not been as reluctant to engage in homosexual practices, although even in this sphere activity has been meagre. He has acted as passive agent in fellatio sporadically since coming into manhood. He has often wished that he were a woman; he has carefully examined his asthenic frame, pointing out whatever relationships he could with the female body. The secondary hair distribution, which is really irregular, has occasioned effeminate interests in him.

He dreamed he was a patient on Dr. Y.'s ward; Dr. Y. has only female patients. He was reminded of a dream he had had a few days previously, to wit: "F., a man, was having intercourse with me; I wondered in the dream if I had a vagina." In the dream "we were both clinging together, face to face. I had the face of a woman and also, I believed, a vagina." He said that a few days before the

dream he had been in Mr. F.'s apartment; a woman was there; Mr. F. had intercourse with her, following which he turned her over to Henry, who could not carry out the sexual act with her. In the dream he had the face of this woman. Dreams with such direct representation were not infrequent.

He dreamed of "a dog with a very large penis." His associations were as follows: "The dog had a human appearance, like a man I know, a man who is constantly telling me of his experiences with women. He describes in detail the entire sexual act. I had the idea in the dream that the dog would rupture a female. Then I thought I was homosexual and that I was going to be ruptured. The man I speak of showed me his penis a while ago; it is very large." He holds the view that men who have intercourse are vulgar and animalistic; in dreams he frequently pictured men in the bodies of lower animals.

"I dreamed of having my own penis in my mouth. I used to try to reach my own organ; it does not disgust me to think of it, because we don't mind swallowing our own saliva; the seminal fluid and its contents are nothing more than body secretions."

"I dreamed that I was masturbating and I was having repeated orgasms; then it seemed I had my own penis in my mouth." The last two dreams are evidently of an autoerotic nature. After all, the basis of homosexuality is self-love.

"In a dream I said I was a fake-man, that in reality I was a woman. I was wearing lady's slippers. It may have been in the same dream that I was embracing a man. I had the face of a beautiful girl."

"I dreamed that I had a bottle of cod-liver oil emulsion in my hands. I was to take it to make me gain in weight. I don't know who gave it to me; I just found it in my hands. In the dream I thought someone might say it was seminal fluid; I also thought of certain women, who are said to have regained their health through the invigorating ingredients of semen."

"I was tightly embraced in F.'s arms. I felt like a woman."

One day, while wondering if he were not predominately female, he examined his genito-rectal area. "I wanted to see if I was a woman. I found a little slit at the rectal orifice and for a time I couldn't convince myself that I was a man. I thought my nervousness might be due to my bisexuality. That night I dreamed that a man was having sexual intercourse with me."

The above represents the more vivid types of homosexual dream experiences. As a rule his dream life was by far less symbolic than

his waking life. Because he recognized this, for a long time he recorded only those dreams which he thought were asexual; as the resistances were breaking down during the analysis, he began to relate more and more of his dream life, until finally he recounted all that he could.

His behavior toward the members of the family left no room for doubt that the familial drama was fundamental. This topic was partly considered in the beginning of the paper. Ever since his mother remarried, his hatred toward his step-father has been so intense that he has insistently begged his mother to leave her husband. He became decidedly ambivalent toward her, as she continued to remain faithful to his hated rival. He loved her with as much ardor as he hated her; he despised her because she spurned his advances. Throughout the 13 years of love and hate he offered to provide what he considered a far more peaceful home for her than he alleged her husband was able to contribute. Yet, at no time has he been economically independent; he has continuously been supported by those at home, not, however, as far as he is aware, by the step-father. The truth is that the latter is not, and never has been, antagonistic to him and, moreover, he has steadily contributed a share toward Henry's support. Concomitant with the love for his mother, he has steadfastly refused to live at home. A short time after she remarried, he went to a distant city to live with a favorite sister, but within a few months he returned to his mother, because he developed the same feeling toward the sister's husband that he harbored against his step-father. From the age of 13 to 17 he was accustomed to leaving the home early in the morning and to returning late in the evening. His neurosis, insidiously growing more and more complete, was being gratified in a partial manner through attachments to clinics and physicians, until finally, when he was 17 years old the complexes assumed such huge proportions that he left home to go to a hospital. In the latter institution he became entirely obsequious to the physicians who fondled his neurosis, while he was resentful to those who tried to remove the cause.

As stated previously upon his official discharge as a patient, when he was 18 years old, he remained in the hospital as an employee. The promotion had no perceptible effect on his neurosis. The unconscious strivings were so securely fixed to their modes of expression that removal from home and partial economic independence comprised but a thin veil. During his last year in college, he was discharged from the hospital; this step threw him back upon

the complete support of those at home. Out of respect for his neurosis, as his people thought, they were prevailed upon by him to pay for his maintenance, while he lived away from home. Yet, under careful analysis there was not a single feasible reason, save for his attitude toward the members of his family, why he could not have lived at home. Time and again the analyst tried to convince Henry that his feelings towards those at home were responsible for the situation, but just as often he failed (through his wish-life) to see the connection. The home was quiet throughout the day and in the evenings he could have studied in a quiet room. But, he rationalized, the house was in the lower part of the town and he preferred the upper; furthermore, the neighborhood was undesirable, although he professed not to know in virtue of what it was undesirable; again, he felt uneasy at home; this feeling, it was ascertained, was due solely to himself, not to any environmental conditions. He attributed it to the many neurotic symbols then prevalent, claiming that they were less intolerable elsewhere than at home.

DISCUSSION

All of the essential facts as brought out by the analysis have been carefully and repeatedly reviewed with the patient without the semblance of any sound appreciation of their value on his part. He believes that family influences may play a part in the lives of others, but in his case only the neurotic elements are of importance. His opinion of his illness is much the same as the opinion of the frank case of schizophrenia, who under psychoanalytic treatment claims that he should like to be rid of the disturbing factors, but he cannot because he is not responsible for their occurrences. The mechanism in Henry's case is that designated as projection, in that he fails to recognize that any part of his sickness may be due to factors over which he may have control. He considers that there is a congenital basis for the neurosis and that, therefore, he is powerless to do anything of a curative or of a palliative nature. The analyst feels that, even if there were well-founded reasons in the field of heredity or of congenitality, they could not explain his fundamental trend of interests, which comprises the wish to be guided in his life work by the infantile components formerly in the unconscious sphere.

From the standpoint of physical type, according to Kretschmer's conceptions, Henry is definitely of the asthenic type. Whether this has any connection with his "character" is open to question. It is possible that there may be some relationship between the body-

build and the malignant-like features, that seem to resemble those observed in schizophrenia.

Henry has drawn from the sphere of intelligence almost exclusively to try to gain the consciously desired level of adaptation, while he has not made any wholesome efforts to convert the infantile emotional bonds into adult forms. Whatever success we have had in making him appear less neurotic has been due in largest measure to the more complete and advantageous application of the more genuinely intellectual processes. Or, expressed in another way, the sphere of intelligence was flexible and amenable to improvement, whereas the emotional sphere and its immediate constellations were rigid and unresponsive. We hope that he will be able eventually to turn some of the infantile libido in the direction of adult needs and experiences. That will form the therapeutic means by which we may be able to make him appear as a still better social unit.

From the study of borderland and neurotic conditions, especially as regards those with schizophrenic-like elements, it seems possible that the factors operating to bring about dissociated mental syndromes may be more clearly recognized. The overwhelming attachment of libidinal forces to infantile unconscious elements may result in an almost complete severance of affectivity from those intellectual processes useful to adult behavior. In the case of Henry, the emotional manifestations were almost exclusively devoted to the deeply regressive experiences, scarcely any sharing in his intellectual pursuits. The emotion (fear) was constant, though the setting changed much and often. He was fearful at home, when alone or with others; he was fearful when away from home; at work or at school, at play or at the theater the same type of emotion persisted.

Save for that part of his intellectual functioning that served to act as a cloak to the infantile emotional attachments, his intellectual processes were confined to the symbols that represented the unconscious wishes. Indeed, the entire sphere of intelligence comprised a blanket rationalization. The reduction of large realms of associated material to single words or thoughts is analogous to the condensation so frequently seen in schizophrenia. We may take as an example any one of Henry's symbols; he was attracted to all moving vehicles; on analysis the main trend turned to all automobiles; then to doctors' automobiles; a doctor's automobile, a particular type of a doctor's automobile; a doctor who owned that type; the doctor himself; the doctor's assurances that he need not fear; if he need not fear, he could happily retain the underlying funda-

mental wish, viz., to relieve the earliest experiences with his mother. Through such a hierarchy of symbolisms he was able to veil the origin of his life efforts. Furthermore, as each successive step in the symbolic structure was replaced by a new and more disguised one, the equivalent emotional values were likewise replaced. In its final representation the formula, deprived of the intervening symbols, as they had been by Henry, was this: All automobiles gave pleasure, because they meant the preservation of mother-son unity. The last sentence sounds extremely illogical; it is thoroughly unintelligible until the latent meanings are understood. One of our cases of schizophrenia uttered smilingly such phrases as the following: "Not when you see the point, I don't know how it comes; I never ordered to go home—you must like it—mother fed all the dogs and cats—I did all I could—they can't go fishing like they did. There are no flowers, no friends. Rub me up and rub me down. Tell the truth, never mind. I will fix them like a roaring lion." The patient was smiling and happy as she related the above. It was definitely ascertained that the remarks referred to her attitude toward her parents, when she was a child; furthermore, she was expressing in symbolic language the solution of the problem, as she would like to have had it; hence, the happy mood. What we commonly designate as "inappropriate mood reaction" becomes with full knowledge of all the associations an appropriate mood reaction; we cannot understand the new language, because it is purely individualistic; it is the possession of the one who has devised it, until we have studied and translated it, when we also can speak understandingly with the patient.

To us dissociation of emotional and intellectual processes comprises a highly complex symbolic representation, the understanding of which can be attained only by knowledge of the entire career of the individual, and more particularly by the orderly correlation of the symbolic forms of expression.

A CRITICAL DISCUSSION OF THE CONSTITUTIONAL ANOMALIES OF EPILEPTICS

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In recent years two widely divergent groups of investigators into the nature and cause of epilepsy have arisen. The first and apparently most widely accepted group has taken the old histopathologic cortico-marginal gliosis and placed such morphologic findings as a part of the symptomatic pathology of the whole disease process. In other words the findings at autopsy are held to be but effects of a still more obscure causation. The next quest of the morphologic researchers has been to indict the basic (systemic) metabolic defects and often to indicate that those obscure defects are still more remotely conditioned upon endocrine imbalance. These and similar investigators have gradually extended their scientific scope until a more functional view of the whole problem has resulted and it is frequently summarized as the psychobiologic view of the organism as a whole as applied to the interpretation of the epileptic constitution. However seemingly psychological such views appear, they are really not so but are relatively static in concept and still deeply conditioned upon preformed patterns of vital modes of response for the total organism. To break away from such essentially biologic concepts a new group has appeared that approximates the whole issue for the instinctive aspects of the dynamic or psychoanalytic standpoint. This viewpoint is still undergoing great changes constantly and is hardly beyond the experimental stage. Perhaps my own work during the past decade gives the best summary of the general trend in this latter direction. Inasmuch as this is essentially a psychological one of the whole problem many readers may be willing only to concede at present that the personality and nature of the epileptic is to be thus explained and not the frank aspects of his seizure phenomena. However this may be I may here set down cogently the main argument of this more known hypothesis before taking up the chief purpose of this anthropologic critique. I have crystallized the general formulation of a host of investigators in this field and placed the general characteristics of the epileptic succinctly and categorically under the designation of epileptic constitution or makeup. This constitution, I maintain, is not brought about as a result of epileptic seizures solely as the majority of investigators in this field have heretofore maintained but that his essential char-

acteristics antedate the seizures and indeed are present in different stages of formation from infancy. The majority of my case studies bears out this contention although as might be expected the character is usually more pronounced in epileptics having frequent and severe seizures. In point of fact it would seem that both the character as well as the seizures proceed from the disorganization of a peculiar psychopathic constitution as a biologic substrate. From the objective viewpoint it can be shown that the salient characteristics of the epileptic makeup are egocentricity, supersensitiveness and an emotional poverty. These characteristics are now grouped in what is termed a form of epileptic narcissism. Epilepsy thus viewed psychoanalytically is an ego or narcissistic neurosis whatever the constitutional factors may be. By a special form of narcissistic transference and the use of the phantasy method the state is broadly analyzable and finally shows that the fundamental fault is an excessive reaction formation of narcissistic protection against all previous or continued castrations or traumas. These traumas suffered in the first instance are from the birth, breast, bottle weaning and especially the diaper withdrawal. It is claimed that these castrations render the epileptic emotionally infantile and easily susceptible to degrees of libido regression upon the imposition of life stresses at various levels of adaptation.

I contend that the nature and degree of the attack portray the depth of regression even to that of metrærotism as seen in the deepest states of coma. Inasmuch as the several points of fixation and castrations are in the formation of secondary narcissism or relationship with the mother, a narcissistic transference on the part of the patient is necessary to gain a phantasiaal recall of this period. To the average epileptic the whole external world is invested with pain or displeasure, hence he builds a proportionate wall of narcissism as a protection and defense against, or in place of, an objectivation of his libido which so jealously guards the very dominance of the ego. The loss of consciousness is a violent effort to break down this barrier and to recover the former rapport with the world which he once experienced in the intra-uterine life. I reaffirm that the fit is therefore a sort of repetitive compulsion of the so-called death impulse. I would cite the well known emotional flexibility and lessened pain in experiencing the outer world which the epileptic gains in the deepest regression in the fit and for a brief time thereafter. Thus the fit mechanism is an unconscious attempt to repair this primary trauma of the withdrawal of autoerotism in the various castrations of the mother-child relationship.

I believe I have made progress in reducing the epileptic state by repeated analysis so that the secondary narcissism is the more acceptably repressed or sublimated (discharged), or transformed into object libido thereby reducing the dynamic drive of the libido energy that remains attached to the ego. As a tentative formulation I would state that the essential epileptic is intrinsically a specific pattern of oral and anal erotic in whom the clinical phase presented by him is the reaction formation of narcissism known as the epileptic makeup; that the excess formation of the latter produces a rigidity and inelasticity of the personality incompatible with flexible living. Hence the explosive fit, which is a necessary corollary to the state as a whole.

In order that we may approximate a fair field of study of this important problem it may be necessary for us to summarize briefly in a critical manner the very question as to whether or not there is a specific substrate of physique for the epileptic. Many attempts of this sort to elicit a possible pathognomonic syndrome has been undertaken in the past. Even before modern anthropometric methods were brought into use the effort was often made. Recent studies here seem to foil the promise that such a specific physique exists. Yet the data are more interesting than the mere statistical enumeration shows, for aside from the assiduity of such forms of research the early attempts to judge the whole of the organism by one or more of its several parts and further to extend such data to the future interpretation of a problem that far exceeds any conscious formulation either physical or mental, are quite futile. Nothing less than a totality of objective as well as subjective data will approximate an answer to the question which the phenomena of essential epilepsy presents today.

In his chapter on "Diagnosis of the Predisposition" Féré sums up our knowledge of the physical basis of epilepsy of the unmotivated type. Lombroso had called attention to the fact that some genuine epileptics accused of unmoral and criminal acts are tall and well nourished and above the normal in weight, which observations tend to refute the claim that these subjects are physically inferior. Lombroso's own figures, however, show that one-half of our four hundred measured were below the average height. That the victim of the comitial disease is physically defective seems to have been remarked by Aretæus and in later times by Bartholinus and others. Apparently the first attempt to apply biometrics was made by Lasague about 1877. In suspected epilepsy he says one should always examine the face and cranium for asymmetry. Garel

and also Féré himself took up this problem, measuring both epileptics and controls for symmetry. Féré's controls comprised many neuropathics who were not epileptics. Both observers found a considerable fraction of excess in the epileptics, although this is not so pronounced as one would desire. The ratio of epileptic to non-epileptic asymmetry seems to have been about 14 to 11. But irrespective of figures the asymmetry of the face in epilepsy is striking and may even be recognized in children. As a result defective skeletal development and anomalies of consolidation have been regarded as furnishing the main organic predisposing factor. Aside from mere asymmetry there are many evidences of defective osseous development. The bosses of the frontal and parietal bones and the malar prominences, are all less prominent than in the average subject; the orbital cavity, nasal bones and maxillae often show inferior development; the teeth are apt to be defective in several ways—badly implanted, backward in evolution and carious.

Premature synostosis gives rise to a peculiar scaphoid type of skull not uncommon in epileptics, but there are various types of cranium not produced by this means which are also common and in general malformation of the skull of the most opposite characters is associated in the mind with epilepsy. With these static peculiarities are often associated muscular anomalies, as tic-like movements, strabismus, nystagmus, stammering, etc.

The asylum material examined by Féré and others naturally includes a large proportion of original mental defectives and no line of demarcation can be drawn between the stigmata of the epileptic on the one hand and those of the idiot and insane on the other. These stigmata are often found in the simple psychopathic degenerative subject whose intelligence is normal and who is free from epilepsy. The epileptic is believed to lie in this respect between the simple degenerate and the mentally defective and alienated; so that the feeble-minded epileptic should present more stigmata than the epileptic whose mentality was originally intact.

Féré found much astigmatism in his epileptics, the percentage being about 72. This was in some cases unilateral and was discovered not by the usual refraction tests but in the course of study of the fundus oculi by the mirror. Pupillary anomalies of one kind or another are extremely common—asymmetries including asymmetry of pigmentation, eccentric deviation, peculiarities of reaction, etc. Féré even finds among his French subjects a predominance of light eyes over dark in a population showing normally many more dark than light eyes. Especially common is a pale washed

out blue eye. This sort of departure from the normal should have no force in a population predominantly blond.

Asymmetry of the ears alone has but little significance for one ear may have been compromised in development by some intrauterine experience but deformities of the ears which indicate arrested development, as partial absence of the helix, the Darwinian point and anomalies of the lobules possess significance. In theory there should be asymmetry and underdevelopment of the thorax in epilepsy and this may or may not coincide in a measure with the thorax of phthisis. That many epileptics develop this affection is not singular considering the universality of tuberculosis. Féré and others have made numerous measurements of the height-girth ratio and chest capacity in epileptics as contrasted with controls. The results appear to have been completely negative and the epileptic evidently shows no special predisposition to tuberculosis whether through defective thoracic development or any other expression of physical inferiority.

In theory with defective development of the abdominal wall hernia should be more common, but the epileptic seems quite free from this condition. Apparently the defective cranial development is not reflected in any corresponding congenital shortcomings in the thorax and abdomen. On the other hand the genitals appear to be defective in a large number of these subjects. Small testicles, cryptorchism, phimosis and hypospadias are more common than in controls and may stand in some slight relationship with the irregular sexuality of the epileptic which is, of course, principally motivated from the psyche. Onanism, pederasty, incest and other sexual aberrations are often encountered and might be brought into relationship with congenital phimosis, anomalies of the gonads, etc. The sexual organs of epileptic women, in contrast with those of the male, are not known to present anomalies.

The extremities of epileptics have not been subjected to much investigation. The rather short stature of the average epileptic often seems in marked contrast to his long reach, the disparity being considerably more common than in the normal subject. Asymmetry of the hands and feet has been considered especially in relation to left-handedness and left-sidedness in general. In a large proportion of Féré's subjects the left hand and also left foot were larger than their fellows of the right side, and for the feet alone the ratio of left to right was 2 to 1. To what extent superiority of the left hand and foot coincides with left-handedness is not stated, but it is of common knowledge that left-handedness is more

common in epileptics and degenerates in general than in normal subjects.

Limb asymmetry includes greater prominence of one natal mass over the other. Long fingers are common with asymmetries in the two hands. Flat feet were present in a third of epileptics examined.

Static defects, however, are inconclusive without dynamic correspondence. Epileptics are rarely vigorous subjects and do not possess great muscular energy. If the figures of the dynamometer for normal subjects be given as 53 for the right and 40 for the left hand, the corresponding figures for the epileptic in Féré's experience were 36 and 32. That left-handedness in epileptics need not be extreme is shown by Féré's study of over 300 subjects in which there were but 14 left-handers. As the normal frequency is 2 per cent this is not a high figure, but the contrary. The analytical dynamometer showed that the strength of the individual fingers was much below the average. Many tests of flexion and extension in both upper and lower extremities show a general inferiority, but flexion is better conserved than extension. Supination is said to be often imperfect. According to Lombroso and Féré the epileptic sometimes assumes the attitude of the ape, the feet being further apart than is normal.

Tactile sensibility is diminished in a large number of epileptics and even anesthesia is not rare, the muscular sense being almost invariably reduced while smell, touch, vision and taste were compromised in the order named. In about two-thirds smell and touch were diminished and vision in over half. This can easily be verified for visual acuteness and fields of vision, and there is a mass of figures which show the frequency of contraction of visual fields, especially for color vision. But according to Holmgren this inferiority may be due largely to the colorless life of the interned epileptic, for reduction of vision may be dependent largely on environment. Insensibility to pain is often seen in the epileptic and may perhaps partly explain his callousness toward the sufferings of others.

Epileptic girls are apparently tardy in the establishment of menstruation, 16 being the minimum age found by Beau who states that but few menstruate before this period. Coated tongue is the rule and this cannot be corrected by purgation. With this peculiarity are associated constipation and occasional anorexia. The sluggish state of the digestive tract resembles that of the melancholiac and indicates a depressed state of nutrition. It may respond to dietetic and medical treatment but since it is not a reflex of constipation cannot be helped by mere laxatives.

Similarly a sluggish state of the skin is often seen. Parasitic affections, notably pityriasis versicolor, are common and likewise anomalies of pigmentation. Since many cutaneous affections are of dietetic or gastroenteric origin one should expect to see more acne and eczema among epileptics.

Some interest has been aroused in the study of epilepsy from the viewpoint of the anthropological types isolated by Goldthwaite and by Bryant of Boston. The former groups the extremes of man into narrowback and broadback types, which correspond fairly well with the carnivorous and herbivorous types of Bryant. In both groups mixed or normal types occur midway between the extremes. The carnivorous type is lean irrespective of stature and does not develop either adipose tissue nor large muscles. Members of this group are characterized by agility. In the herbivorous type the subjects are of the weight lifting or wrestling build and are distinguished by strength.

Hodgkins of the Monson State Hospital of Massachusetts has measured 115 epileptics in regard to build and found about one-half were normal in this respect. Of the other half the great majority were of the carnivorous type. There were but 8 herbivores in the entire 115 measured, a rather good confirmation of the infrequency of powerful and well nourished individuals with epilepsy.

Not readily intelligible is the find that of the epileptics of normal build 60 per cent showed a hereditary taint while among the carnivores but 10 per cent showed a taint. Apparently in the small, slender epileptic exogenous factors play an unusual rôle and heredity a minor one.*

Since discharge convulsions occur in such a great variety of subjects, even in the habitual form, it may seem impracticable to attempt to accuse any particular type or habitus of body as more convulsible than another save in such well known examples as stand out clearly. Under the latter should be mentioned the subject with physico-psychic stigmata of degeneration mentioned in another connection. The alleged physical basis of the disease is made up very largely of these supposed somatic stigmata. Taking the confirmed epileptic just as he stands the effects of the disease will be found side by side with alterations which pre-exist. Thus to numerous stigmata of degeneration may be added scars about the head and the tongue from injuries sustained during the convulsions.

Anthropometry applied to known typical epileptics has shown many deviations. The average stature as stated is slightly under normal. This is also true of organ weights. These slight discrep-

* Bull. Mass. Comm. Mental Disease, 1918-1919, Vol. II, Page 50.

ancies are found only in cases of tainted ancestry and those which present stigmata. Vogt sums up by stating that height, total weight, weight of heart, kidneys and brain are all slightly under the average. The greater the natural development of the organ the more it is disposed to suffer in development. At the same time the mortality is greater and the tenure of life shorter.

Under diet and metabolism it has long been claimed that nitrogenous diet and of late years purins have been specially accused of increasing convulsibility, so that it is possible to diminish the severity of the attacks by proper diet. Apparently some substance formed during the paroxysms and eliminated by the kidneys is irritative to those organs and sets up toxic albuminuria. One of the older views of epilepsy ascribed the discharges to the accumulation of some by-product of metabolism and more recently some such substance has been likened to an antigen in the blood which produces the phenomenon of anaphylaxis. That a toxic principle accumulates in the blood in status epilepticus seems certain by reason of the parallel between that condition and uremia and puerperal eclampsia. Such accumulation is the cause and not the result of the condition although probably a vicious circle is at work.

According to Vogt many epileptics are in perfect health between attacks and the most scrupulous examination may bring to light nothing suspicious. Neuro-muscular symptoms such as weakness, pareses, unsteadiness of movement and gait and sluggish nervous reactions are very common after seizures and perhaps more so after Jacksonian than general seizures. These may be quite persistent and since they pertain to organic more than genuine convulsions are hardly an integral part of the makeup of the born epileptic. Otherwise stated they are focal in character. They are, naturally, very valuable in the diagnosis of organic types. The diminution or abolition of the skin and tendon reflexes on both sides and even a bilateral Babinski point to general exhaustion. The presence of an unilateral Babinski with increased knee jerk may speak for an organic lesion.

Speech and special sense disturbances of all kinds which follow a paroxysm may persist in the interval for a variable time. With visual disturbances may be associated pareses of the eye muscles. In the vast majority of cases only cortical symptoms are seen, other portions of the brain being but rarely involved. It is conceivable that a neurological examination of an unknown subject in the absence of a history or stigmata, might readily point the way to a diagnosis of an epileptic, through the association of muscular weak-

ness, speech disorder, special sense anomalies, behavior of reflexes, etc. The presence of a Babinski reflex was formerly heralded as evidence of organic epilepsy and much study has been devoted to the interpretation of this sign. Babinski, Ræcke, Redlich and numerous others have found this as well as the Oppenheim reflex in genuine epilepsy; so that with some clinicians it has come to suggest the latter. Redlich found that it was not constant after attacks, even in the same subject; but that in some subjects it could persist for days after a seizure. It may come and go rapidly after an attack or may not appear until long afterwards. Before disappearing permanently it may return again and again. Finkelburg has found a positive Babinski after an attack of *petit mal*.

The significance of this phenomenon is therefore a double one. When constant it is indicative of an organic lesion but when transitory, even although able to persist for days, it is evidence of exhaustion of the pyramidal paths. Cases of genuine epilepsy may in rare instances show it during an entire interval period and in such cases great care is necessary in deciding between genuine and organic. Vogt likens the pyramidal paths in these cases to an elastic band, which is intact but has forfeited some of its elasticity. Finally a coincidence is always possible, as of some lesion which has slowly evolved in the brain and has set up general convulsions before the development of focal symptoms.

Generally speaking, many phenomena of defect seen in the intervals and once attributed to the presence of focal lesions can be duplicated in general epilepsy, a positive Babinski being but one of the number. Redlich estimates that nearly half of all genuine epileptics show some of these focal interval peculiarities.

In view of the claim that epilepsy is favored if not primarily caused by some factor involved in intestinal stasis, considerable interest has been felt concerning the presence or absence of intestinal adhesions at autopsies. In the autopsy material of the Monson State Hospital, it has been shown that adhesions are to be found in about 18 per cent of all autopsy cases. While at first sight this appears large it is said to be no larger than the percentage found in any general hospital. This figure is believed to be due to some extent to factors which enter into the life of the average interned patient and which need not be discussed here. There is no evidence in favor of the stasis theory to be deduced from the above finds.

The death rate and causes of death as compiled from the joint figures of the Monson State Hospital and the Craig Colony show that roughly a little over a third of the inmates die directly from

the disease; that somewhat less than a third die jointly of tuberculosis and pneumonia while the remaining third die of scattering diseases like any group of miscellaneous individuals. But 12 per cent die of the degenerative visceral diseases of middle and senile years and not over 3 per cent of gastrœnteric disease. Infectious diseases kill less than 4 per cent and affections of the nervous system aside from epilepsy about 4 per cent.

After isolating the heredo-familial type of epileptic as the one in which constitutional anomalies are to be expected, Buscaino* begins with cranio-facial asymmetry which is attested by Bourneville, Lombroso, Lasague, Féré, Tonnini, Vieille, Marro, Roncoroni, Garel, Gotardi, Pison and Binswanger.

Facial asymmetry, according to Stier, is frequent in the left-handed and in stutterers (Mass and Gutzmann). Familial facial asymmetry with left-handedness has been studied by Neurath.

There are other anomalies which are certainly not cerebropathic, as augmentation in size of the mandible, thought to be of pituitary origin. Lombroso found this in 16 per cent of epileptics, Tonnini in 31 per cent and Roncoroni in 18 per cent. Tonnini found fetal mandible in 4 per cent. Prognathism was found by Tonnini in 20 per cent. High palate in 65 per cent was found by Ziegler; handle ears by Tonnini in 25 per cent. Roncoroni found sessile lobule in 70 per cent of female and 45 per cent of male epileptics. Tonnini found the Darwinian tubercle in 50 per cent. Ottolenghi and Carrara found the prehensile foot in 41 per cent. Tonnini found obesity in 33 per cent and Ziegler the tapering hand of hypopituitarism in 5 out of 20 obese epileptics.

Thickening of the cranial vault has been noted by a large number including Clark and Prout, while several have also remarked thickening of the anterior fossa of the base of the skull; of the entire base of the skull especially the sphenoid by McKennan; this was found in 57 per cent of all cases examined. This was also noted by Johnston and Henninger. Johnston also noted thickening of the roof of the orbit and the sinus and cells of the sphenoid. Malformations of the sella of various types have been recorded by McKennan, Johnston, Henninger, Ziegler, Caldwell and Tucker—hypertrophy of the anterior and posterior clinoid processes and especially the latter, closure of the sella with formation of an osseous cavity, unmotivated alteration of shape and hypoplasia of the sella. (None of the changes seem to have been of the type seen in tumors of the hypophysis.)

* Constitutional Anomalies of Epileptics and Biographic Epilepsy. V. M. Buscaino, assistant to the Psychopathic Clinic, Florence, Italy.

In regard to the frequency of anomalies of the base of the brain McKennan, Johnston and Henninger examined 55 crania of epileptics and in 16 found osseous thickening in the clinoid processes or anterior fossa while in 22 both zones were thickened. In 35 in addition to the preceding the sphenoid body was slightly thickened and also the entire base of the cranium. In other words there was some thickening in 76 per cent of all cases examined. Moreover, the entire material was made up of essential epilepsy. Ziegler found anomalies of the base 17 times out of 20. Timme in this connection has described a hypopituitary type of epilepsy. While this is correct it is also known that the opposite condition of acromegaly has been found in association with epilepsy by Montier, Leri, Grincker, Panas, Marinesco and Gad. Further, in tumor of the hypophysis without reference to pituitary syndromes, epilepsy has been reported by Cushing, Hoffman, Bauer-Wassing, Cagnetto and Kollarits, while the same has been seen in dystrophia adiposogenitalis by Berger, Boyd, Fuchs, Redlich and Blunmgarten. Redlich, like Timme, ascribes epilepsy directly to a lesion of hypophysis. Large figures along this line are as follows: Creutzfeld saw 9 epileptics in 178 acromegalics; Frankl-Hochwart 16 cases of epilepsy in 100 cases of tumor of the hypophysis; Creutzfeld 7 cases of epilepsy in 61 of tumor of the hypophysis without acromegaly; and Rhein 16 cases of epilepsy in 169 tumors of the hypophysis without acromegaly. If these cases are added we find nearly 10 per cent of epilepsy in lesions of the hypophysis (9.6 per cent). Conversely McKennan, Johnston, etc., in 185 epileptics discovered 8.6 per cent of tumors of the hypophysis. It is probably not a question here of casual relationship but the same physical constitution fosters both conditions—epilepsy and hypophysis lesion.

The association of rachitis and epilepsy has been noted by Schröder, Derrecagix, Ohlmacher, Binswanger, Fischer and Ge—the latter found it in 56 out of 65 cases of epilepsy. Osteomalacia has also been seen by a number of writers but no figures are given.

Abnormal brain weights have been recorded in epileptic idiots and imbeciles. Megalocephaly of this type with weights from 1,700 to nearly 3,000 grams has been established by 10 or more observers. Of 15 large encephala—1,700 to 1,927 grams—5 belonged to epileptics (Campbell). Whether all of these patients were mental defectives is not positively stated but according to the literal text the majority are simply recorded as epileptics without reference to intellect. It is certain, however, that the highest of all the brain weights—2,850 grams—was in an idiot. Wildermuth studied the

cerebral convolutions and found various anomalies apparently of insufficient development, chiefly abnormal confluence. Of 35 cases 58 per cent showed confluence of the parieto-occipital with the infraparietal fissure. In other cases there was abnormal continuation of convolutions or sulci. All of the other figures are small. Dercum in a study of 14 cases seems to have corroborated the above in substance, but no details are given case by case. Bratz found several instances in which defective development of the cortex (macroscopic) was associated with hypoplasia of the kidney, glioma, etc., there being also familial incidence—mother and child, brother and sister. Of 16 cases of absence of the corpus callosum seen since the time of Rokitanski and Virchow 5 occurred in epileptics. This was not necessarily a primary lesion and in one case the defect was due to leptomeningitis and hydrocephalus.

Buscaino next takes up the microscopical evidence of structural anomaly. Meine, Jakob and Wohlwill have noted pachygyria with notable amplification, thickening of the cortex with at times subdivision into two zones through the presence of a layer, microscopically visible, of nerve fibres. Conversely Pollak and Traumer saw vague stratigraphic delimitation of grey and white matter with formation of a wavy line and Alzheimer, Volland, Roncoroni and several others saw anomalous delimitation of individual layers of the cortex.

Numerous histologists have seen heterotopia of the grey matter of the brain—occurrence of the same where ordinarily it is not present; for example, near the wall of the lateral ventricle. Among those who have witnessed this phenomenon are Virchow, Otto, Hoffman, Meine, Meschede, Matell, Turner, Probst, Volland, Jakob and Tramer. The latter in one case found heterotopia of the adrenal gland within the kidney substance. Zingerle seems to have been the only one to find the same heterotopia of gray matter in the cerebellum and medulla.

There is good evidence of ganglionic cells in white matter. Pollak noted this find in every one of 11 cases examined, while Turner saw it in 27 out of 36. Others who have found this comprise Roncoroni, Schnizer and Tramer. Volland and Pollak have seen heterotopia of Betz cells and Pollak the same of Purkinje's cells. Anomalous orientation of nerve cells was seen by Roncoroni, Jakob and Pollak.

Atypical presence of pyramidal cells was seen by Jakob, Tramer and Volland (bipolar, fused giant cells; large atypical cells in the cerebellar cortex). Pollak saw formations like those of tuberous sclerosis, that is, the cellular elements.

The fetal cells of Cajal-Retzius in the cortex and more externally have been seen by Turner, Ranke, Gerstmann (4 out of 6), Volland (19 in 24), Jakob (5 in 5), Wohlwill (2 in 3), Tramer, Pollak and Schmincke. In the deeper strata of the cortex similar cells—neuroblasts or immature cells—were found by Turner, Bevan Lewis and Pollak.

Other finds have been binucleate Purkinje cells (Ranke, Alzheimer); aplasia of Betz cells (Turner, Tramer); presence of the stadium verrucosum of Ranke in the cortex (Alzheimer); increased thickening of the stratum of external associated fibres (Kæs); reduction of the system of horizontal fibres (Pollak).

In 41 cases of genuine epilepsy studied by Turner histological nervous anomalies were present in 70 per cent. Ranke noted anomalous evolution in every one of his cases and Jakob also saw 100 per cent in 5 cases as did Pollak in his 11 cases. Volland's percentage was 75 per cent in 24 cases. Aggregating these finds makes the frequency 77 per cent.

Passing to function we find that left-handedness may be cerebropathic or familial (Latte). Stier finds that in 50 per cent the condition is familial. In left-handed families we are apt to find stammering. Ogle found 50 per cent to be familial. Lueddekens, Sikorski and Bolk each found dysarthria associated with left-handedness, the former in 25 per cent. Conversely in a material of stammerers Gutzmann found that 14 per cent were left-handed. Of a material of miscellaneous speech disturbances the left-handed contingent was much larger—50 per cent. This was confirmed by Heilbronner.

Von Bardeleben showed a hereditary element in 90 per cent of left-handedness. In regard to the origin of the latter Hyrtl associated it with anomaly of origin of the left subclavian artery.

Left-handers are common among epileptics, attested by a dozen good observers. The frequency varies from 19 per cent of Steiner down to 4 or 5 per cent. Later figures are notably smaller than some of the older ones. Redlich's old figures of 17.5 per cent have been reduced to 9 per cent; Stier's original 14 per cent is now down to 5 per cent. Steiner showed the curious fact that right-handed epileptics often come from left-handed families, about 70 per cent; while left-handed epileptics come from right-handed families in about 16 per cent. Very rarely do we find left-handed epileptics in left-handed families. Thus there is a remarkable association of left-handedness and epilepsy, in some figures amounting to 89 per cent.

In family tree investigations of epilepsy one should bear in mind that epilepsy, left-handedness and stuttering are apt to be associated. Typical cases are summed up briefly. In addition to the triad above mentioned we should find simple convulsions and enuresis nocturna. One example may be given: The mother is left-handed; one daughter is left-handed and stutters; one son stutters; one daughter is epileptic; one son has enuresis nocturna (Steiner's cases). To the above as a family tree equivalent should also be added facial asymmetry. All of these are expressions of an abnormal constitution.

Enlarged or persistent thymus indicating the thymicolymphatic constitution has been recorded by at least 20 observers. Volland saw this in nearly 25 per cent of cases (25 in 103) but others more infrequently, as 1 in 6, 1 in 12, etc. Hyperplasia of other lymphoid structures has also been seen by a number of reporters (9 are given).

Hypoplasia of the aorta has been reported by at least 12 writers and Tonnini's percentage was 28 although others evidently found it much smaller. Other forms of vascular hypoplasia have also been recorded and may be added to the preceding. Bartel claimed that in these victims of the status thymicolymphaticus the brain is overweight. This author confirmed by others states that in these subjects there is a tendency to glioma. Naturally there should be some confusion here with symptomatic epilepsy due to brain tumors. In regard to the blood pictures in epilepsy, many have found in the inter-paroxysmal period a mononucleosis, in about 81 per cent; a lymphocytosis has been seen in 40 per cent and a relative neutropenia in 66 per cent. These pictures are thought to be associated especially with anomalies of the endocrine system. This new view has been advocated by Schoondermark, Di Gaspero, Graziani and Zimmermann. Secretory anomalies of the endocrines are believed to make themselves felt on the vasomotor system. Of other facts which connect epilepsy with anomalies of the endocrine system and vegetative nervous system may be mentioned the oculo-cardiac reflex which in the majority of epileptics is of the vagotonic type, i. e., strong and exaggerated. Numerous reporters to this effect comprise Lesieur, Vernet and Petsetaks, Dufour and Legras, Aguglia, Andriani, Sainton, Giraud, Alzina Metis, Fumaraola and Mingazzini, Graziani, Licci and Naccarati.

Several have also shown that epileptics are vagotonic to pharmacologic tests, as Orzechowski and Meisels and Graziani. In connection with an endocrine origin of epilepsy Buscaino showed in

1914-20 that a certain crystalline product of anomalous thyroid glands was able to determine convulsive crises. This body was of protein nature, formed octahedral crystals, and contained in its molecule some phenol derivative. In 1916 Parhon found these crystals in the thyroid of an epileptic during life.

Studies by Buscaino, Parhon and Stocker have shown that these crystals occur in about 70 per cent of epileptics. A large number of non-epileptics have since been investigated and less than 15 per cent of these controls showed the crystals. The total number of epileptics examined was 62 and of controls 326. In addition to the authors who obtained the positive results others collaborated on the controls and the latter comprise Isenschmidt who examined 106 and Clerc with 83. The manner of examination does not appear and it also seems as if symptomatic cases were included with idiopathic. Apparently the thyroids were examined both post mortem and after operation and the crystals were revealed in sections of thyroid properly stained. The enlargement of the microscopic examination is not stated but was presumably not very high. Other facts which implicate the thyroid are epileptic convulsions in myxedema and cretinism (Browning, Hertoghe, Levi-Rothschild and Rapp). Epileptic progenitors have myxedematous children (Hertoghe) and goitrous and Basedow parents epileptic children (Browning, Jeandelize, Samaja, and Parhon). Goitre is not rare in epilepsy and has been seen by Jeandelize, Schultze, Bastin, Mosse; Basedow and epilepsy are frequently associated as recorded by Parhon, Kurella, Ballet, Benedikt, Raymond, Delasiauve, Euziere, Margarot and others.

Study of the distribution in Italy of goitre and epilepsy is instructive. Sormanni and also Morselli have noted the frequency of epilepsy in the maritime counties and recently Consiglio has corroborated this. It is in these coastal communities that the thyroid seems stimulated. Maranon states of the Spanish coast that the hyperthyroid predominates there. However, there are certain exceptions where the inland situation is no preventive. Not only goitre but cretinism flourishes in Lombardy away from the sea, while epilepsy is also more frequent. The abnormal secretion of the thyroid may be a factor in both affections. Special complex protein bodies have been found in the blood of the epileptic by Ceni, Trevisanello, Held, Lumiere, Pagniez, Mouzon and Turpin, Antheaume and Trepsat and Weichbrodt. Schlect has noted that eosinophilia is common and may be due to parenteral disintegration of abnormal protein. The author finds that in the inter-paroxysmal

period about a third of the epileptics show eosinophilia. Frequency of this find without any exact figures has also been claimed by a series of investigators, only Roncoroni coming to the opposite conclusion. Popovici attempted to throw light on epilepsy through Abderhalden's reaction. He tested blood serum against thyroid and found that in the epileptic the phenomenon was much more intense and more frequently positive.

Several investigators have studied epilepsy from the angle of an anaphylactic phenomenon, comparing it with experimental anaphylaxis, serum sickness, etc., the attempt being made also to study anaphylaxis on both the epileptic and non-epileptic. Buscaino gives the record of many animal experiments of his own over several years interval.

The evidence of the similarity of genuine epilepsy to anaphylaxis is worked out in animal experiment in great detail and need not be summed up here; but Buscaino assumes that the sensitizing protein originates in the thyroid and suggests the term "dysthyroid anaphylaxis." The chief authority on the anaphylactic nature of genuine epilepsy is Ceni, who was at work on the hemic origin of the latter in 1899 before anaphylaxis had been discovered. His work is entirely on rabbits and guinea pigs and may be passed over.

Lumiere, Pagniez, Mouzon and Turpin and others have worked along the same line and have found that when the serum of epileptics is injected into the heart of the guinea pig it perishes of convulsions. The animal, however, may be immunized against this result. In mankind Widal, Abrami and Brissaud produced crises in a genuine epileptic by injecting him with his own blood serum. This effect was constantly obtained. Attempts to treat epilepsy on the principle of antianaphylaxis go back to Ceni. Numerous others, chiefly Italian, have applied his methods and in a material of 54 cases positive results have been obtained in 26. This must not be confused with the non-specific protein treatment for it consists in the use of a vaccine obtained from epileptic blood. Held introduced a serum prepared from rabbits and has seen 70 per cent of favorable response in 400 epileptics although apparently no cures. Buscaino mentions several instances of the use of non-specific protein but hardly scratches this large subject and we find no allusion, for example, to crotalin. The favorable action of luminal has been ascribed by Santenaise and Tinel and by Strauss to its power of disintegrating the offending protein substance in the blood and not to any obtunding of the reflex arc, etc.

Pagniez and Lieutaud discovered that merely eating chocolate

would produce a convulsion in an epileptic while at the same time the blood showed Vidal's hemoclastic shock. This case certainly was purely anaphylactic. By administering to this man very small quantities of chocolate he became habituated to the substance and showed neither the seizures nor blood phenomenon. In regard to the action of luminal on the blood it is said to suppress the Vidal hemoclastic reaction. Various operations have been performed on the endocrines and sympathetic with more or less positive results. In theory thyroidectomy ought to cure the disease and is said to do away with anaphylactic sensibility. As thyroidectomy would deprive the organism of a valuable secretion it is evident that partial removal would have to be the practice. Parhon practised hemithyroidectomy in two epileptics but the results do not seem to have been satisfactory. Crile seems to have removed one suprarenal and three-quarters of the thyroid besides dividing the cervical sympathetic in 11 epileptics, but while there was improvement it does not seem to have been decisive. There is no allusion to the large literature of reduction of the suprarenals from German sources.

Asthma and migraine are both regarded as largely anaphylactic and the two are often found associated in family histories. There are also numerous points of contact between these two conditions and epilepsy. The same blood states as eosinophilia and the hemoclastic shock occur. Recently the protein therapy has been efficacious in treating migraine. Buscaino seeks to show in support of his thyroid theory that injury to the head, tumors of the brain, etc., cause but a small amount of genuine epilepsy which is therefore not a cerebropathic disease save in the Jacksonian form. His physical substratum of epilepsy is primarily the result of dysthyroidism and his degenerative or inferiority anomalies throughout the body appear to be only associated with dysthyroidism.

CONCLUSION

From the foregoing data it is relatively obvious that there exists no constant physical substrate for the epileptic constitution. That is, no essential alteration is shown that is not seen in an equal number of other individuals who are, perhaps, biologically inferior either as a result of their inheritance or because of the continued activity of their disease phenomena. Just what part is due to the latter and what proportion may be ascribed to the fundamental constitutional inheritance are matters which anthropological data as yet offer no line of demarcation. If one wished to take a broader psychoanalytic view, one might say that organic anomalies pave

the way to inferiority of mechanism; or that many of the defects present are, at least so far as functioning is concerned, somatic manifestations of narcissistic defect colligative of those known to exist in the psychic constitution of epileptic narcissism. However, these general conclusions are but suggestive rather than conclusive in the sense of our being able to determine the exact relationship which constitution has to the narcissistic neuroses, if we may be permitted to call essential epilepsy an instance of that type.

SUGGESTIONS REGARDING DUTIES OF MEDICAL INSPECTORS*

BY GEORGE W. MILLS, M. D.,
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I have felt for some time that the Commission, the hospitals and the patients were not getting the maximum benefit from the visits of the medical inspectors and as many changes in the law and the rules will be made in connection with the organization of the Mental Hygiene Department I thought the time opportune to present these views and was asked to do so today that they might be discussed by the Conference.

The provision in the Insanity Law which specifies that the inspector shall see all patients admitted and remaining since his last visit is the pivotal point. No doubt at one time this provision served a useful purpose but I question if it does now and if it is necessary. During the last two fiscal years we have seen nearly 18,000 admissions in the civil State hospitals, and practically all of our available time is spent in examining these cases. This is especially true at the large hospitals in the Metropolitan district. We call it examining them; in reality it can be only a perfunctory passing in review. Very little can be done except to ask the routine questions as to complaints, etc., if we are to make the prescribed four visits a year. It is tedious to all concerned and I believe unprofitable. Since the inspection department was created much of the suspicion in the minds of the general public has disappeared and the standard of care, degree of special attention and methods of parole have improved remarkably.

Of over 8,000 admissions seen last year, 34, or approximately 0.4 per cent, made complaints of ill treatment but investigation did not elicit any foundation therefor in a single instance. Fifteen special investigations were made in response to written or verbal accusations of illegal detention or wrong treatment. No case of improper detention was found and only in one case was the complaint of ill treatment substantiated. In this case the facts were known to the hospital superintendent, the guilty attendants had been dismissed and the district attorney consulted. During the year 17 of the new admissions were found to be non-psychotic but in every instance this had been realized by the hospital physicians and appropriate steps for their removal taken.

* Read at Quarterly Conference at Brooklyn State Hospital, December 16, 1925.

Practically all of the State hospitals now have a clinical director, who could and should be held responsible for the type of patients admitted, suitability, parole possibilities, etc. I believe it is still desirable to see all voluntary, physician's certificate and criminal order admissions and for all wards to be visited and any patient desiring it to be given a special interview. The rest of the time I would prefer to spend in making actual inspection of the hospital, discussions with the superintendent and staff, surveys of medical and psychiatric work, equipment, laboratory work, staff meetings, investigation of reported injuries and escapes, investigation of complaints, etc.

One of the prime objects of inspections is to improve the care given patients, and to make the inspections in the way I have outlined would, I believe, serve this purpose, at the same time make the reports of more value to the Commission and the superintendents and place the inspectors in a better position to point out in constructive comparisons the advantages and good features of one hospital to another, also render the inspector's opinion of greater value in the making of service record ratings and in serving on the Examination Committee.

As done now we see the hospital in an artificial setting. The patients are kept in from work or from occupational therapy classes. The routine of the ward physicians and of ward activities is quite different from the usual. It is comparable to the inspection of a factory with all work suspended and the employees standing at attention. This is entirely due to the statutory provision that we see all new admissions and the tendency to collect these in one place on a service to save time, a measure more or less necessary to complete the work on schedule.

I, therefore, recommend that Section 4, Article 2, of the Insanity Law, as printed on page 54 of the Handbook, be changed by the elimination of the phrase "Especially those admitted thereto since his preceding visit" and that General Order No. 23, entitled "Duties of the Medical Inspector and Deputy Medical Inspector in relation to State Hospitals" be modified by the following changes in Subdivisions A, C and F. (A) now reads:

"He shall see all patients admitted and remaining since the last medical inspection and preserve a list of their names and in the case of voluntary patients determine whether or not they are suitable cases for voluntary admission and shall see any patients desiring an interview. In

his tour of the ward he shall go among the old patients with a view of aiding in the discharge of aliens, dotards, hemiplegics, idiots and other cases unsuitable for detention in the hospital."

I would reword it somewhat as follows:

He shall see all voluntary, physician's certificate and criminal order patients admitted and remaining since the last medical inspection, preserve a list of their names and determine whether or not they are suitable for the various types of admission specified. He shall also see any patients desiring an interview, and in his tour of the wards go among the old patients with a view of aiding in the discharge or parole of any considered unsuitable or no longer in need of detention in a State hospital.

Subdivision (C) now reads:

"He shall visit all parts of the premises, all wards, rooms, dormitories, closets, attics, basements, kitchens, dining rooms, stables and outhouses at least once a year and shall note the efficiency of provisions for fire prevention and the adequacy of the fire escapes."

I would introduce a direction regarding the making of rounds with physicians and it would then read something like this:

He shall make rounds with the physicians in charge of the various divisions of the hospital, visiting all wards, rooms, dormitories, closets, attics, basements, kitchens and dining rooms, and at least once a year the shops and the various out-buildings. He shall note the efficiency of provisions for fire prevention and the adequacy of fire escapes.

Subdivision (F) which now reads:

"He shall from time to time note the efficiency of the medical work of the hospital." I would change by omitting the words "from time to time" and introducing psychiatry, so that this subdivision would direct that he shall note the efficiency of the medical and psychiatric work of the hospital.

General Order No. 27, relating to the duties in private licensed institutions, I would leave unchanged except to add physician's certificate after voluntary in Subdivision (C), that is, this subdivision would read:

He shall see all patients admitted and remaining since the last medical inspection and preserve a list of their

names, and in the case of voluntary and physician's certificate patients determine whether or not they are suitable for such admission and shall see any patient desiring an interview.

I think there can be no question but that it is desirable to continue to see all new admissions to private institutions and in the smaller ones perhaps to see all patients both old and new.

THE PAROLE SYSTEM IN MASSACHUSETTS*

BY THEODORE A. HOCH, M. D.,

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Dr. Kline regrets that he is unable to attend this conference and he has asked me to tell you something about the subject which he was to have presented and in which he is very much interested.

It would be well to state that in Massachusetts we do not use the word "parole," but prefer to use the term "trial visit." "Parole" is suggestive of penal methods, to our minds, and implies liberty and freedom as long as the individual does not violate the terms of his parole. We prefer to convey to the patient's mind that, although he may not have fully recovered from a mental illness, nevertheless his condition is such that, under supervision, home care in his case is proper and advisable and that, should he require further hospital care and treatment, the hospital is ready to offer its facilities again without formality or delay.

The parole system in Massachusetts has somewhat the same history as the parole system in New York. It has been developed more or less in the same way. In 1883 a law was passed permitting patients, unrecovered but suitable to be taken out of the hospital and cared for in their homes, to leave the hospital on a trial visit for a period of 60 days. At the end of this time the patient was automatically discharged from visit, provided it had not become necessary to return the patient to the hospital before that time. This period, however, was too short and many patients had to be recommitted soon after the expiration of the visit, with the resulting inconvenience and delay to the families in recommitting the patients who might have benefited by prompt return to the hospitals, and it also involved an additional expense to the county for the commitments. In 1905 the period of trial visit was extended to six months. For the same reasons in 1917 the length of the visit was again extended, and since that time patients have been permitted to leave the hospital for a period of one year. This period of trial visit is long enough so that the patient can demonstrate his fitness to get along in the community, even though he may not have fully recovered, and also, if necessity demands it, he may, because his condition, be returned to the hospital without formality should he desire to return, or should the hospital authorities advise it.

* Address at Quarterly Conference at Brooklyn State Hospital, December 16, 1926.

A considerable sum of money is saved by obviating the necessity of recommitment, and the easy access to the hospital of patients who need to return has a wholesome effect on the patient and family, who might hesitate to seek re-admission to the hospital with the formality of a commitment facing them. This open-door policy is advantageous both to the hospital and to the patient. It relieves, to some extent, the crowded hospitals. Suitable patients are returned to their homes early and a return to the hospital, if necessary, is far less formidable.

In 1910 there were 539 patients out on visit from the state hospitals of this state. In 1916 there were 1,065 on visit. In 1918, the year following the extension of trial visit from six months to one year, there were 1,100 patients on trial visit and in 1926 there were 1,675 out on visit.

Massachusetts has a very liberal policy in allowing patients to return to their homes or to leave the hospital, and the superintendents of the hospitals are urged to dismiss patients to families or friends at the earliest possible time, so that if a relative makes application within a few months, or earlier, and can show that the patient will be properly cared for, and if the superintendent knows that the patient's condition is such that he can safely go into the community, being neither suicidal or homicidal, he is permitted to go home on trial visit. Section 90, Chapter 123, of our laws, provides that any patient who has been dangerous, or is likely to become so, shall not be discharged even on a trial visit unless the discharge is approved by the Department of Mental Diseases, so that no patient who is known to be dangerous is dismissed without sufficient safeguard.

Massachusetts, of course, is a smaller state than New York. Our hospitals are nearer together and serve a smaller community than the hospitals in New York State, so that it is easier to send patients out than it would be in New York, and for that reason we are able to exercise a little more supervision. When a patient leaves a hospital he is expected to report at the institution, or at one of the out-patient clinics, at certain stated periods during the time of his trial visit. In a small community this can readily be done without great inconvenience or expense to the patient. We have a large percentage of patients out on trial visit. There are about 22,000 patients in our hospitals. About 17,000 of these are in mental hospitals,

although the remainder, who are feeble-minded and epileptic, also come under the supervision of the Department of Mental Diseases. Of these 17,000 there are 1,675 patients out on trial visit at the present time. These patients are automatically discharged at the end of the year, if it has not been necessary to return them to the hospital previous to that time. On the other hand we also have a system of renewal of visits. Many patients who, at the end of the year, for some reason or other are not making satisfactory progress and have not made a full recovery, but who may soon require hospitalization again, have their visits renewed for another year. This renewal of visit does away with the necessity, oftentimes, of recommitment. The doors of the hospital thus stand open without any further formality of commitment and, at the same time, there is the saving to the counties of the expense of commitment, should necessity require their readmission to the institution from which they came. About two-fifths of all patients out on trial have their visits renewed.

We have, in connection with all of our hospital districts, clinics which are established in all the larger cities and towns within a convenient distance from the hospital. Monthly clinics are conducted by the superintendent, or some member of the hospital staff. At these clinics patients, who are out on visit, report and are examined and are given such advice as is indicated at the time. These clinics are also out-patient clinics and serve an additional purpose of offering the service of psychiatrists to the general public free of charge and, in this way, a certain number of patients are supervised without hospital commitment. At some of these clinics as many as 40 or 50 patients may present themselves in a day. Most of these are patients on visit, but a small number are new patients. These clinics are the link between the hospital and the community, and it is through them that contact is had with patients on visit, and without them the control and supervision of patients on visit would be far less effective.

Back of this whole system of trial visit is social service, without which, the system could not be carried on with its present effectiveness. The Department of Mental Diseases has a social service director, who supervises and coordinates the activities of the various social service workers at the hospitals, each hospital having one or more social service workers. These workers are especially

trained in psychiatry, most of them having had the benefit of a course such as is given at Smith College, Simmons College, and other schools. Our quota calls for about 50 psychiatric social service workers. They are of assistance to us not only in the after-care of the patients, but many, being residents of the hospitals, assist in getting the histories, in making contacts with families, in investigating their homes, and obtaining additional information concerning the environment or background of the patient which otherwise could not be obtained. The hospital staff thus obtains a more complete picture of that patient's environment and when the question comes up in placing the patient on visit, full information as to the advisability of such action is available. One hospital, the year after the establishment of the social service department, discharged 116 patients, on recommendations of the social service workers who had previously investigated the homes of these patients. The social service worker attends the staff conferences, becomes familiar with the patient and his psychosis, has an opportunity to follow the patient on the ward, and in this way develops an interest in the patient and a knowledge of the problems involved in any particular case, so that, when the time comes to release the patient, the social service worker is fitted not only to prepare the family and home for the patient, but to continue supervision of that patient when he is placed on trial visit.

The social service workers have regular conferences. The director has a weekly conference to which all workers come and bring their problems. In addition there is a monthly conference, devoted to lectures on psychiatry, mental hygiene, or some other allied subject. We feel that the social service workers have assisted us a great deal in opening the doors of the hospitals. They are interested in their problems, optimistic in their outlook, and helpful in effectively placing patients on visit.

In comparison with other states it would appear that our recovery rate is rather low. Undoubtedly, we actually do have as many recoveries as do other states. Patients who leave the hospitals on trial visit may return in another attack before the expiration of the visit, thus we do not get the benefit of a statistical recovery. Most of our hospitals base their recoveries more on a psychiatric recovery than on a social recovery. Before discharge all patients are brought before the staff and the cases are carefully

discussed and very few patients are discharged outright. Patients may recover within the period of their visit, but if there is a possibility that they may have another attack, or if the family desires to have the visit renewed, their trial visits may be renewed and are renewed again and again; thus the patient is never reported as having recovered.

Of course the social service workers cannot follow every patient. They do however, establish contacts with the local agencies in the town or city, or wherever the patient may happen to be, and in this way they keep in touch with some of the patients. On the whole, we feel that it is a very desirable thing to get patients into their natural home environment as soon as possible and we feel that it is good treatment to do so. The public has confidence in the hospital and appreciates the interest of the hospital in the welfare of the mentally ill in its locality, whether it be in preventive psychiatry or in the problems of readjustment.

THE DEVELOPMENT AND EXTENSION OF THE PAROLE SYSTEM OF THE NEW YORK STATE HOSPITALS*

BY HORATIO M. POLLOCK, Ph. D.,

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The present parole system of the New York State hospitals is an outgrowth from an old custom of permitting patients to leave the hospital temporarily to visit friends or to go out on trial for indefinite periods. The custom for many years was not authorized by law but had the sanction of usage. Chapter 446 of the Laws of 1874, the general Insanity Law which preceded the State Care Act of 1890, provided that "no insane person confined in any county poorhouse, or county asylum shall be discharged therefrom * * * without an order from a county judge or a judge of a Supreme Court." This law did not apply to the counties of Kings and New York. In these two counties the superior professional standing of the asylum physicians was recognized and they were authorized to discharge patients. In the State lunatic asylums the board of managers was given authority to discharge patients on the certificate of the superintendent. The certificate, however, had to state that the patient had completely recovered, or that he was incurable or that he was harmless.

The superintendents of up-State institutions for the insane were then as now law-abiding citizens but they disliked to bother county or supreme court judges or boards of managers about the discharge of patients and some of these physicians were hesitant about making out the required certificates. They found an easier way. They discovered that although the law restricted discharges it said nothing about paroles. Whereupon the superintendents proceeded to parole patients and sometimes forgot all about discharging them. Thus the parole system, that we extol today, developed in part through the evasion of an obnoxious law.

The matter ran along without change until after the passage of the State Care Act in 1890. The new Commissioners in Lunacy were not satisfied with the law relating to the discharge of patients and recommended its amendment, but not being immediately successful in securing legislative action, they issued an order on November 18, 1890, that no insane patient while in the custody of an institution be allowed to go on parole who in the judgment of the medical superintendent is homicidal, suicidal, destructive or dangerous either to himself or others, and that no parole be granted for a greater period than 30 days inclusive of the date thereof.

* Read at Quarterly Conference at Brooklyn State Hospital, December 16, 1926.

One of the reasons given for limiting the period of parole to 30 days was that the possibility might arise of patients being reconfined when not insane by reason of recovery during the parole period. Six years later, a law authorizing a superintendent of an asylum for the insane to parole patients for a period not to exceed 30 days was passed and became Chapter 545 of the Laws of 1896. For several years thereafter everybody concerned seemed satisfied with the law; but in the Commission's report for the year ended September 30, 1907, we find the following argument for a longer parole period:

"It is a patent fact to those who have had much to do with committing insane patients to State hospitals that a paroled patient manages to exercise self-control and to appear and actually do well for about two months after his discharge on trial from the hospital. At the end of the 30-day period during which he is paroled, the influence of the institution is still in control; and he often feels so sure of himself and so safe that he refuses to report in person or apply by letter to have his parole extended for an additional period of 30 days, as provided by the law. Often before another month has elapsed, however, he breaks down again and recommitment becomes necessary. Appreciating this fact, and with a view to preventing the patient from the discouragement of such a breakdown, and to protect his friends from the uncertainty and perplexity attending a recommitment, such a patient is often held very wisely in an institution for an additional month to cover the epoch at which the second break might occur."

Although this argument in the light of later experience does not seem entirely convincing, it had the desired effect. Chapter 261 of the Laws of 1908 extended the time limit for paroles from 30 days to 6 months.

At the Quarterly Conference held at the Central Islip State Hospital, October 18, 1916, Dr. Marcus B. Heyman presented a paper on the extension of the parole period and recommended that the time limit be fixed at one year instead of six months. The recommendation received the support of the Commission and the Conference and the desired change was made by Chapter 335 of the Laws of 1917.

In the meantime the attitude of the institution authorities, the courts, the Legislature and the general public with reference to paroles and discharges had greatly changed. Patients were no longer considered as belonging to the criminal class, and admission to a hospital for the insane was no longer regarded as a life sentence.

Other important developments affecting the parole system had taken place. The most important of these was the establishment of a system of after-care of patients. This consisted of three principal factors, namely, voluntary after-care committees, after-care agents, later termed social workers, and dispensaries, later designated mental clinics. The organization of the first after-care committee in New York City in 1906 was due to the vision, wisdom, and initiative of the late lamented Louisa Lee Schuyler. This committee, which was connected with the State Charities Aid Association, employed Miss E. H. Horton as its after-care agent. On April 13, 1906, she began her duties as a social aid to the paroled and discharged patients of Manhattan and Central Islip State Hospitals. This innovation had the hearty support of both Dr. Smith and Dr. Mabon.

About the same time a similar social service for out-patients was being developed at the Rochester State Hospital by its alert and progressive superintendent, Dr. Howard. He assigned a hospital nurse to supervise paroled patients and to assist them in adjusting to community life.

On October 1, 1911, Miss Horton was directly employed by the State to continue the after-care work, the value of which she had demonstrated for five years.

At the Quarterly Conference held in Albany, February 21, 1913, paroles and after-care were discussed in papers by Drs. Howard and Mabon, and at the September Conference of the same year the matter was further discussed by Mr. Homer Folks. At the 1913 session of the Legislature a bill was passed providing for the establishment of dispensaries by the superintendents of the State hospitals. This became Chapter 626 of the Laws of 1913.

At the end of the fiscal year of 1906 when after-care began, there were 196 patients on parole from the civil State hospitals. These constituted 0.7 per cent of the total patient population. A steady, although not rapid, increase followed year by year. In 1910, the number on parole reached 589 and in 1912, 813. Then came the year 1913 when the Commission, the superintendents, the Quarterly Conference and the State Charities Aid Association, all got intensely interested in the matter of paroles. The papers of Howard, Mabon and Folks were published, a few more social workers were employed and a start was made in the organization of out-patient clinics. At the end of that year the number of patients on parole reached 1,300. This great gain was the direct result of the special interest that had been aroused.

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The feasibility of maintaining large out-patient departments having been demonstrated, progress became relatively easy. In 1920, the daily average number of patients on parole reached 2,322, and in 1925, 3,362. In 1926 the number dropped to 3,231.

With the increase in the number of paroles has gone an increase in mental clinics and social workers. This branch of the service suffered severely during the war, but now is operating on a larger basis than ever before. At the end of the last fiscal year there were 36 social workers employed and 51 mental clinics in operation.

In several State hospitals one physician, usually a senior assistant, is specially assigned to conduct the out-patient work. With the aid of the physicians on the several services and with the advice and direction of the superintendent and the clinical director the out-patient physician selects the patients to go on parole, and directs the work of the social workers in the placement and supervision of paroles. The concentration of responsibility involved in this arrangement insures greater uniformity and regularity in paroling patients and better supervision of those on parole.

It is evident that our State hospitals are better equipped than ever before to supervise paroled patients; but since 1923 the number of patients on parole has not been increasing. In fact, on November 1, 1926, we had fewer patients on parole than on June 30, 1923. The percentage of daily average patients on parole dropped from 8.1 in 1923 to 7.3 in 1926. Comparison of the percentages of daily average patients on parole from the several hospitals in 1923 and 1926, shows that the percentages in 1926 were higher in 8 hospitals and lower in 5. Utica State Hospital was in the lead in 1926 with a percentage of 13.9 on parole and Rochester was second with a percentage of 12.3. Other hospitals having percentages above the average were Brooklyn, 11.3; Buffalo, 11.1; Gowanda, 9.6; Manhattan, 8.0; and Kings Park, 7.4. The percentages of the other hospitals were: Hudson River, 6.7; Willard, 6.2; Middletown, 5.8; Central Islip, 5.3; Binghamton, 5.2; St. Lawrence, 2.8; Marey, 0.8; Harlem Valley, 0.7; and Creedmoor, 0.0. Had the Utica average been reached by all of the State hospitals in 1926 the daily average number of patients on parole would have been 6,129 instead of 3,231.

In view of the serious overcrowding which reached 28.3 per cent on November 1, 1926, we naturally ask: Can the situation be relieved by paroling some of the patients now in the hospital? Judging from our previous experience and from the present status of paroles in some of our hospitals, it seems probable that a con-

siderable increase in the total number of paroles might safely be made.

To accomplish this important end united effort on the part of hospital officers and employees is essential. Responsibility for the out-patient work should undoubtedly rest principally on one physician but he should have the hearty support of all the other members of the medical staff and of the social workers, supervisors, nurses and occupational therapists. In addition frequent intensive surveys of the patient population might be made to make sure that no one eligible for parole had been overlooked. The general aim should be to parole patients before they become institutionalized and lose interest in life outside the hospital. In most cases it is not necessary to hold the patient in the hospital until he completely recovers. It is well known that with proper environment and supervision many patients will continue to improve after leaving the hospital.

As our studies show that the first three months of hospital life are of most importance in determining the future status of patients, it is suggested that treatment during that period be made as specific and intensive as possible. This would require immediate examination and study of the case and prompt institution of treatment. It is possible that the day of parole might thus be advanced in many cases.

For many patients the transition from hospital to community seems to be too great a step. An intermediate station to make the transition more gradual has often been suggested. Such station might be a farm colony like the Lake Farm of the Rochester State Hospital or a sheltered workshop colony like that established at Papworth, England, for arrested tuberculous cases. The patient would be employed at suitable productive work and might be wholly or partly self-supporting. As soon as he acquired an independent status he would be paroled. To be successful such colonies for mental patients should be very simple and living conditions therein should be similar to those found in ordinary homes.

Colonies of various types have proved of great value in making the feeble-minded self-supporting and in restoring them to community life. I see no good reason why they could not be used to equally good advantage in the rehabilitation of convalescent mental patients.

Another great aid in strengthening our parole system will be the permanent mental clinics that I hope will soon be established in the principal cities of the State. Such clinics could take over the super-

vision of paroled patients in their respective cities and give them much better attention than our periodic clinics are now able to give.

In closing I wish to refer to the irrational outcry against the paroling of patients which followed the homicides of young Noel about two years ago. So far as we are able to determine, paroled patients on the average commit fewer crimes than a like number of so-called sane people of like age-distribution. In many communities the annual number of arrests equals five per cent of the population. Dr. Ashley in his intensive study of the history of 1,000 paroled and discharged patients covering several years found that 12 had been arrested, an annual rate of only a fraction of one per cent.*

To refuse parole to a recovered or much improved patient because a few paroled patients commit offenses is unreasonable and an injustice to the patient. The paroling of patients under suitable supervision is the most humane and effective method yet devised of readjusting them to community life and instead of being decried should be encouraged and further developed.

Mental hospitals are curative rather than custodial institutions. They exist to restore disordered minds. All treatment is given for this purpose. To deny or obstruct the parole of the patient, which is the culmination of treatment, is to strike a death blow to curative work.

* STATE HOSPITAL QUARTERLY for November, 1922, page 65.

NOTES ON THE CLASSIFICATION OF DEFECTIVE DELINQUENTS*

BY V. C. BRANHAM, M. D.

The following data has been secured from the study of 135 cases at the New York State Institution for Defective Delinquents made in the early part of 1924. The study is the first psychiatric report to be submitted by the institution. This article represents only in part the data obtained at that time.

The family history of these inmates seems to indicate that the percentage of foreign-born parents is double that to be found in the State as a whole, due possibly to inferior heredity from foreign stock or a certain relationship between the foreign-born parent and the child who is trying to Americanize himself. Nearly half of the parents of these inmates show marked intellectual inferiority, or chronic physical defects. The economic failure of the parents was just as decisively indicated as the social inadequacy. There were relatively nine times as many feeble-minded among the brothers and sisters as among the community at large and nearly half of the total number studied had not succeeded in progressing beyond the sixth grade in school.

Among the inmates themselves, the percentage of foreign-born was found to be no higher than the average for the State, and New York City contributed slightly less than its quota to Napanoch. The rural districts, however, had nearly twice their share as might be expected when one recalls the tendency of the feeble-minded individual to gravitate to the areas where the economic pressure is least. Furthermore, the mountainous districts of the State have been seeded by nests of low-grade stock which frequently has had its original source in the criminal classes of other countries. The proportion of negro population in Napanoch seemed to be about the average for the State, although in the prisons it was decidedly higher.

The first born and the last born child (18 per cent in each instance in this series) are found to occupy positions of strategic importance to gain privileges. There is a tendency for the parents to favor both types and often such children cannot readjust well after they leave the protection of the home. The most frequent position the inmate occupies in the family was found to be second in a family of three or four children, or third in a family of five. The significant

* An abridgment of an article printed in the *Journal of Criminal Law and Criminology*, Volume 27, Number 22, August, 1926.

feature about a boy being the "runner-up" in a small family is that he must continually compete for privileges with the favored first-born.

In the series of men now under discussion one would expect many mal-adjustments during school life. Examination of the data obtained on this subject shows that about 65 per cent did not succeed in reaching the fifth grade. One out of every ten was found to be a chronic truant. Only three graduated from public school and none entered high school.

Mal-adjustments along the lines of defective intelligence, however, were not the only difficulties encountered. The various reactions to this situation during the school age are worthy of comment. One of three possibilities usually develops, a compensatory extroverted reaction, an introverted reaction or a neutral attitude. Those who compensated by extroverted reactions such as combativeness and stubborn resentful disobedience were found to be about one-fourth of the total, the introverted (seclusive, overtimid and over-sensitive) represented one-fifth, and those who showed no intense reaction whatever (the dull, inactive types, the good-natured individuals not resentful to "kidding," as well as those whose attitude was essentially normal) represented the remaining group. The data secured would suggest that the incidence of temperamental difficulties among these men was relatively high (62 per cent).

The reaction of the men after leaving school likewise is significant. The stress of mere existence apparently had sharply accentuated the temperamental difficulties as would be expected in a group in which every member is anti-social but the ratio of extroverted to introverted types was found to be about the same as in school life (about 5 to 4 in each instance). The chief interests of this feeble-minded group centered about vaudeville, burlesque and the movies, as would be expected (more than half the men were exclusively interested in these amusements). The more vicious types of amusements, such as pool hall, fights, street loafing, vagabondage, gambling and drinking, represent a fifth of the whole in respect to the dominant interest. The gang activities and bad companionship considered as a special feature showed 16 per cent involved. Nearly half of the inmates were consumers of alcohol. The observation should be made that in most instances excessive users of alcohol are unstable types (frequently psychopathic) while the moderate user is somewhat temperamental and usually employs this as a refuge from other tribulations. These two classes of

alcoholics were found to be about equally represented in the series.

Not only in the intellectually and emotional fields mal-adjustments of these individuals were found, but their sex life clearly indicated factors at variance with the normal. Sexual maturity coincidently with the physical and mental development was retarded.

For the purposes of this paper the psychic manifestations of sex in the inmates may be conveniently grouped into the normal, the hyper-active and the hypo-active, and the perverted types of reaction. In such considerations the strength of the sexual urge (libido) is of importance regardless of the channel into which it is finally shunted. The standard set for the average libido was the establishment of sexual relations once or twice a week, a lively sex curiosity, fairly strong urge for sex outlet either through auto erotic practices and perversion, or nocturnal emissions and erotic dreams during imprisonment. Again it must be urged that the intensity of the sex drive and not its normalcy is being considered at this point. Only a quarter of the men were found to measure up to the above requirements, while more than half of them were decidedly under-sexed. The hyper-sexed individuals represented only a small proportion of the total, as has been indicated several times previously. The findings, then accord with those of other workers in the field of mental deficiency.

How has this sex urge expressed itself? A sixth of the inmates succeeded in getting married, but to most of these satisfactory sexual adjustments could not be made. In several instances the inmate could not meet the sexual demands of the wife and she left him for other men. In other cases the inmate could not suitably provide for the family. When it is noted that 64 per cent of the whole male population of the country has been married at some time or other, the marital inadequacy of this group of defective delinquents can be realized. Emphasis should be made upon the biological rather than the social significance of this data. Some further idea of the biological failure of the group can be sensed by a consideration of the remaining inmates who were unable to attain the normalcy of marriage. Every other man expressed doubts about marriage or his determination never to marry. Various reasons were given for this. Distinct antagonism to the opposite sex was prevalent although an equal number were too timid or indifferent to make any advances. The antagonism probably is to be interpreted as a sub-conscious recognition of laying the inadequacy at the door of the other party. The roots of homosexuality

and paranoid reactions, of course, are to be directly traced to this. In the latter group of individuals the indifference to women probably is based on glandular insufficiency.

An analysis of the data obtained reveals the startling incidence of such immaturity in this group of defective delinquent. Autoerotic practices are rife. Nearly every man in the institution at Napanoch has resorted to masturbation, which is a common phenomenon among imprisoned men. The practice is admitted freely enough, but the tendency is to minimize its frequency. A fifth of the men, upon their own admission or upon proof, were perverts, mostly sodomist in type. Many others were repeatedly approached, which would indicate in these individuals certain factors such as effeminacy which are quickly and shrewdly recognized by the active pervert. A small proportion of the men showed mother fixations, approximately half of which had a clearly expressed Oedipus complex. No data is available as to how these findings compare with the incidence of arrested sexual development in the community at large.

It is in the field of hypoactive sex development, however, that the most abundant material was found. This was best shown by the inadequacy of sex knowledge, the lack of mingling with the opposite sex both socially and sexually, the delayed age of the first heterosexual experience, the infrequency of normal sex manifestations, such as nocturnal emissions during confinement or intercourse during freedom.

Within the past few years some of the more enlightened writers on sociological subjects have become aroused as to the paucity of sex information imparted by parents to their offsprings. These inmates are no exception to the rule. Only one man of the entire group had had adequate parental instruction on sex functions and only one out of every eight had any such instruction whatever. It became the province of the street gutter, the gang, the reformatory or the prison to initiate the remainder of the group through the usual channels of the vile story, exhibitionism, masturbation and sodomy. Curious to note in this connection is the temptation a feeble-minded child offers to certain oversexed adults for advances which it is felt will not lead to any serious result. The child seldom turns informer because his lack of intelligence prevents him from fully sensing the misadventure. Accordingly, one may find frequent seductions among such children by nurse maids, cousins and adolescent girls. Whatever the source of the inmates' sex knowledge, its sum total was decidedly below par in at least a fourth of

the cases. Childhood beliefs were retained by a number of them. The principle misconception seemed to be that the baby was secured through an abdominal incision, but three men still had faith in the garbage can, suitcase and stork stories. The length of the term of gestation was a perplexity to many, while others could make no clear distinction between male and female.

Much of this ignorance could be traced to the lack of intermingling with the opposite sex. Over half of the men had never "kept company" with a woman. Indifference to the opposite sex, homosexuality, excessive timidity to a feeling of uncertainty about their own sexual virility, and lack of ability to make sufficient money for the usual sundry expenditures involved in keeping company are possibly the factors to be assigned as causes for this seclusiveness. No less than 39 of the men denied any hetero-sexual experience whatever. The veracity of the statements of these men is attested by the paucity of sex knowledge present and by the fact that these men constantly moved in an environment where emphatic assertion of sex potency is a ritual. The average age of the first hetero-sexual experience (exclusive of the group just mentioned) was given as nearly 18 years and the frequency as once in three weeks—an interesting commentary in an age of throwing off of inhibitions.

On the basis of the foregoing sex data, one cannot do otherwise than conclude that the feeble-minded delinquent as a class has a defective sex urge, essentially biological in nature.

The final judgment of an individual's traits is based, of course, upon his activities and behavior. How does the inadequacy of these men in the emotional, physical, intellectual and economic field, as brought out by the preceding paragraphs reflect itself in occupation and social conduct? The average age at which the inmates started to work was about 14 years. The driving economic pressure brought by foreign-born parents upon their children contribute to the withdrawal of children from school at the earliest opportunity. Some of the group were able to use the continuation school while working but it is probable that all relished the chance of leaving because of the difficulty experienced in learning. For many years it has been a well recognized fact that the criminal classes are recruited from certain activities, such as mill operatives, mechanics, teamsters, chauffeurs, laborers, barbers, painters and plumbers—in general, those trades which most readily permit easy employment and quick changes. The drifting, unstable classes can always find a job in such trades. In a few details, however, the activities of the inmates at Napanoch differ from those of the State

prisons, which seems to be a direct result of a lower grade of intelligence in the former group. Farm laborers, teamsters, longshoremen, contributed a somewhat higher percentage to Napanoch than to the prisons. The reverse is true for those engaged in more skilled occupations such as chauffeurs, mechanics, cooks and barbers where a somewhat higher degree of manual dexterity and intelligence is required than the feeble-minded individual possesses. For similar reasons, the prison type may be found among the skilled industries while the defective delinquent gravitates to the unskilled operative activities, such as mill work. Finely co-ordinated muscular movements are impossible to most feeble-minded individuals. All these types stay at a job long enough to secure a "stake" and then they are ready to quit upon the slightest excuse. The desire for change, and temperamental difficulties with the employer or other workers frequently drive them into prolonged periods of idleness during which the tendency to anti-social conduct is much increased.

Not only in occupational activities but also in behavior was the mal-adjustment of this group indicated. All were delinquent, of course. In analyzing the motives back of the offenses, a striking feature seemed to be the number of psychopathic individuals who apparently were irresponsible for their behavior. Some of these became wayward under the influence of alcohol and drugs, others suffered from fugues such as epileptic states, while still others were subject to periodic emotional upsets during which judgment was utterly lacking and the significance of conduct but vaguely sensed by the individual. This is a type of offender that has not received due consideration from penal authorities. It constituted 20 per cent of the entire group. Sex offense played a somewhat more intensive role in the defective delinquent than in the prison type of offender. The motive of suggestibility also was far more prevalent in the former than in the prison convict. The general tendency it appeared, was in the direction of petty larceny, intoxication, incorrigibility, misdemeanors and the milder expressions of resentment against authority in contradistinction to the murder, manslaughter, robbery, grand larceny and other of the more vicious types of offenses seen among the prison group. This attitude, of course, was continued in prison although some of the shrewder recidivists have found it to their ultimate advantage to maintain good conduct. An analysis of the behavior slips made while at the institution showed four fairly-well marked types, the aggressive, assaultive type, the non-aggressive but resentful, disobedient, insolent type, the sneaky, underhanded, uncleanly, destructive, pilfering type,

and the emotionally unstable, psychopathic, irresponsible, episodic type. The assaultive type predominated, but an equal number showed exemplary conduct.

Out of the rather heterogenous mass of material presented in the foregoing discussion, certain conclusions seem to stand out and to justify the formulation of definite policies for the care and treatment of the defective delinquent.

I. Quite obviously, we are dealing here with a type of individual somewhat at variance with types found elsewhere.

(a) He differs from the prison type (exclusive of the delinquent defective which forms a very fair proportion of every prison population) in:

1. Being feeble-minded.
2. More highly suggestible.
3. More rural in origin.
4. More timid, oversensitive and seclusive.
5. Limited to more unskilled activities.
6. Given to the less vicious types of offenses.
7. Having considerably less leadership and initiative.
8. Lessened sexual urge with greater tendency to auto-erotic and homosexual methods of sex expression, as well as poorer sex knowledge.
9. More inadequacy of retentive memory and less fund of general knowledge.
10. Poorer co-ordination of finer muscular movements which directly affects his social status.
11. Less ability to concentrate upon a given task, to form associations when concentrating.
12. A more defective hereditary and environment background.

(b) He differs from the State school feeble-minded type in:

1. Being delinquent.
2. Showing more reaction to his mental deficiency (i. e., greater ego striving).
3. More frequent incidence of emotional instability and psychopathic states.

(c) He differs from the normal individual in the community by being both chronically delinquent and feeble-minded with all that these terms imply.

II. Since the defective delinquent is a special type offender, different from other individuals, special methods of treatment are necessary for his care and rehabilitation. The following sugges-

tions may be made (most of these are already in force at the institution or are in process of development) :

Four well-defined groups of defective delinquent, classified on the basis of prognosis and treatment, are indicated by an analysis of the individual's developmental history, his conduct while at Napanoch and the results of tests and other examinations. These classes are:

1. The fairly low grade, feeble-minded inmate who is uncleanly, given to pilfering and destructiveness. He is usually non-aggressive and requires constant supervision to keep him at his task or to keep him out of mischief. Occasionally he becomes boisterous or insolent but is tractable. He should be kept away from the other types because of the ease with which he becomes the victim of the active perverts. The chances for successful parole into the community are very slight because of the lack of intelligence of this individual, his high suggestibility, and his constant tendency to drift into trouble. Nevertheless, he can be employed to a limited extent with simple tasks on the farm colony. At night, he should be housed in a separate dormitory building with a nominal guard. It is possible to care for this group entirely without the institutional walls.

2. The emotionally unstable or psychopathic type. Many of this group conduct themselves normally for an indefinite period, then suddenly develop emotional upsets in which yelling for hours at a time, disorientation with other symptoms of confusion, or expression of peculiar ideas, mostly paranoid in coloring, may predominate. These episodes are somewhat periodical and present an entirely different picture from that of the prison psychosis, so called. Frequently the symptoms presented are definitely delirious in nature. Others of this group have a frank psychosis which does not seem to present a sufficiently clear cut syndrome or enough misbehavior to warrant transfer to a hospital for the criminal insane. Both of these types keep the other inmates on edge through their excited conduct and yelling through the night, and should be segregated in a psychopathic ward where constant psychiatric study and care can be maintained.

3. A type which may appropriately be called the prison type inasmuch as the general reaction shown both inside and outside the institution more nearly approximates the conduct seen in the usual prison inmate. A portion of these men are aggressively

assaultive and dangerous, others have less assertion but are resentful of authority, insolent, chronically acquisitive, and in general, incorrigible. A third sub-type is the shrewd, chronic offender who always is perfect in his conduct within prison walls. He is the man who "knows the ropes." The frequent violation of parole and the high degree of recidivism to be found among this group makes it a discouraging one for favorable prognosis. All three of these should be segregated from the other types. Their activities should be essentially within the walls and their nightly abode the cell block. A few may be cautiously chosen for the colony farm under strict supervision.

4. The good conduct group (exclusive of the sub-type just mentioned). This type gives better promise for reclamation than any of the other groups. A fourth of the men fall into this category. After suitable observation within the walls, these individuals can be tried on the farm colonies. A modification of the usual colony system seems advisable. A "step-up" to parole can be secured through a graduated series of three colonies in which the first has a suitable enclosure with guard stations. The inmates on this colony will be returned to the institution at night. The second colony will give more freedom to the men, such for example, as no enclosure, guards established over the various groups at work, and suitable housing on the farm itself. The third colony would offer work without strict guard. Here, too, the men can be housed on the grounds. At this point, parole can be taken under consideration and if the man seems to be suitable for such, he can be paroled into the hands of responsible people. In some cases, it is advisable to place the men individually at unskilled work among the farmers or in towns near the institution. Adequate wages are paid them by their employers and they are free to use their spare time in legitimate ways, but their supervision is careful and they can be readily returned to the institution, if necessary.

III. The hereditary and environmental background of these men is startlingly unsound. Marked emotional, physical and intellectual defects are prevalent and the group or class from which these inmates come shows, as a consequence, an inadequacy in social and economic fields. This in itself is a strong factor making potentially, at least, for delinquency. The present methods for testing the various capacities of these men are not suitable. It would seem advisable that a special technique be developed to determine individual achievement capacity, emotionalism, suggestibility, ability

to concentrate, associative powers, extent of ethical discrimination, inco-ordination, etc.—qualities which are peculiar to this type. Of course, these tests have not yet been standardized or even definitely formulated, but the need is great. Napanoch is somewhat isolated and parents of the inmates do not visit the institution very frequently. Accordingly, adequate data on the early life of the inmates cannot be secured unless a method of reaching the home itself be devised. It is imperative, therefore, that a staff of trained social workers be incorporated with the department of psychiatry for the purpose of getting much needed information from the homes, former employers, and associates, as well as to maintain supervision over paroled inmates and to give advice and help to those who are not adjusting well. The probation officer clearly does not possess the proper qualifications for this work, and it should not be relegated to him. His duties lie in other departments of the institution.

IV. The proper classification of the inmates at the Napanoch Institution appeared to be a rather perplexing matter. Accordingly, the writer would like to submit a classification based upon treatment and prognosis for future social adjustment along the lines already in operation at the institution. Such a classification would have as its prime consideration the necessity of studying the inmate from the very moment of his admission in order to determine to what extent consciousness to the needs and responsibilities of the community can be developed. This is a matter of psychiatric examinations, mental and physical tests, proper grouping housing, and occupational activities as has already been pointed out. Members of all four groups would eventually find their way back into the community but the largest and most promising types are placed in the first group just as the psychopathic and least adjustable inmates remain at the bottom of the list. Furthermore, each group demands special methods of occupational activities, housing and treatment, while under the care of the institution, thus ensuring a practical working plan for group segregation.

A CLASSIFICATION FOR THE DEFECTIVE DELINQUENT

I. Community—conscious type (social)

(a) Good conduct group

1. Socially adjustable in community
2. Socially adjustable in confinement only

(b) Unstable group (psychopathic traits not well developed)

- II. Community—indifferent type (asocial)
 - (a) Unplanned, disorderly, childish conduct (active low-grade feeble-minded group)
 - (b) Highly suggestible and easily led (especially for sex offenses—passive low-grade feeble-minded group)
- III. Community—antagonistic type (anti-social)
 - (a) Marked aggressive resentment against authority
 - 1. The assaultive type
 - 2. The acquisitive type
 - 3. Pre-paranoid states
 - (b) Feebly-expressed resentment against authority
 - 1. The pilfering type
 - 2. The disorderly, destructive type (planned)
- IV. Community—irresponsible type (irresponsible)
 - (a) The toxicant group (alcohol, drugs)
 - (b) Psychopathic group
 - 1. Fairly constant abnormal behavior
 - 2. Inconstant abnormalities (cross index with 1b)
 - (c) Episodic group
 - 1. Subject to marked emotional upsets
 - 2. Epileptics
 - 3. Transient delusional states
 - (d) Actively psychotic group (insane)

The foregoing discussion with ensuing statistical data seems to vindicate the theory that the defective delinquent is an individual to be segregated for special study and care; that such segregation is best accomplished by means of a separate institution rather than through the assigning of a department to defective delinquents in other types of institutions, such as prisons or schools for the feeble-minded; and that a mechanism is hereby provided for the careful combing out and permanent detention from the community of vicious feeble-minded individuals who will never be anything else than criminalistic. The protective service to the community at large as well as the scientific reclamation of a very fair proportion of this baffling class of individuals is invaluable.

TRAINING THE IDIOT AND IMBECILE*

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Perhaps the most vital problem to cope with at an institution for feeble-minded children is, "What can be done with the low grade imbecile and the high grade idiot?" Is it possible that they may profit in any degree by special training so that finally they might perform some useful work?

Dr. Charles S. Little, superintendent of the State School for Feeble-minded at Letchworth Village, called attention to the fact that many of these unfortunate children, a real mass of human wastage, were sitting in idleness. They appeared to be playing about with no purpose, making much work for their matrons and attendants, and creating all kinds of disturbances and noises. They were most untidy, always unclean and constantly acquiring undesirable sex habits. To change their habits and make them useful was a stimulating problem.

A group of 57 girls, various types of high grade idiots and low grade imbeciles who could neither dress nor undress, was selected. The only qualification for membership in the class was that each girl must be able to walk to and from her classroom and have the use of one or both hands.

The group was sent out with a cart to clean up. It soon became evident that these children could pick up pieces of paper and small stones that were lying about the grounds. About two hours of their time were spent each morning in the accomplishment of this work. For a period of three months, they were trained to dress and undress. It was an exceedingly difficult task in the beginning, and although improvement was slow, it was gradual. At the close of three months of careful training and discipline, the results were amazing. They are summarized, as follows:

Acquired ability to	Number of girls
Lace shoes	51
Dress and undress.....	40
Keep stockings up.....	57
Tuck in underwear.....	40
Recognize own names.....	47
Sort letters	47
Sew carpet rags.....	48
Knit	9
Miscellaneous	57

* Letchworth Village Publication Number 22.

Two instructors and four high grade morons with capability for doing hand work, were appointed to work out this experiment.

The best type of instructor is one who has actually done dormitory work, thus getting in touch with the children's wants and desires, and learning how they live. It is only in this way that she realizes their need and is able to get down to their world. It is most essential that the work be in the hands of teachers whose interests are fixed upon what is to be achieved. They must possess patience to a marked degree. They must be willing to get down to the level of this type of child and to become an actual part of that child's world.

The efficient cooperation of the chief instructor, Miss Tillie Steffey, whose ready and complete response under great difficulties and discouragements has done much to make this plan effective, is greatly appreciated.

This low grade class which meets from 8 a. m. to 4:30 p. m. has grown from 57 to 139. It numbered 200 for a period of two months, but owing to lack of help, it was necessary to drop 61 of them. If the help problem were not somewhat of a handicap, so that more individual instruction could be given, an increased degree and amount of work would undoubtedly be possible. It is expected that eventually this class will form the nucleus of an industrial school.

This trial test, the object of which was to discover what could actually be done with the group selected, was made with children whose mental ages were classified as follows:

Mental ages	Number
Less than 2 years.....	9
From 2 years to 2 years, 11 months.....	32
From 3 years to 3 years, 11 months.....	37
From 4 years to 4 years, 11 months.....	23
From 5 years to 5 years, 4 months.....	11
From 5 years, 4 months to 5 years, 11 months.....	8
From 6 years to 6 years, 11 months.....	19
Total	139

Note that 101 of them are less than five years mentally. The 19 with the highest rating are apparently of lower grade than six years, and their mental deficiency is further complicated with psy-

chosis, epilepsy and emotional instability. Following are their chronological ages:

Chronological ages	Number
6-10 years	10
10-15 years	65
15-20 years	46
20-45 years	18
Total	139

Of these, 14 are Mongolians, and 5 have paralysis of one arm. One child is totally blind and 6 others have very poor vision. Nine of them have their mental deficiency complicated with a psychosis, and 13 are unable to talk.

The intelligence quotients of the group are interesting.

Intelligence quotients	Number
Less than .20.....	16
.20 to .25.....	12
.25 to .30.....	25
.30 to .35.....	27
.35 to .40.....	24
.40 to .45.....	17
.45 to .50.....	8
.50 to .55.....	8
.55 to .60.....	2
Total	139

The mentality of an idiot girl is so simple that one seems to be baffled by the thought of teaching her. However, if we bear in mind that some difficulty is overcome when the teaching is related to real concrete life experiences, and attempts are made to give much training involving repeated urgings and automatic response, it is possible that important results may be obtained.

The first thing taught our children is unbuttoning the clothing. This involves the easiest and most practical movement the hands can make. A strip of muslin one yard long and two inches wide, with buttons sewed on one end and buttonholes worked in the other end, was used by the instructor to great advantage. It was found most practical to hold this in proper position, while the teacher placed her own hands over those of the child to help her push the button through the hole. Occasionally the child was

allowed to try without any assistance. The frequency with which this motor act was performed, secured greater precision, competency and independence. It required from one day to a week to attain to this, but at the end of that time 51 out of the 57 trained were able to unbutton their own clothing perfectly and with ease.

The child is now taught to keep stockings up. The garters are either taken off or left on the ankle. Getting a firm grip on each side of the stocking is helpful before a pulling upward is practiced. The garters are then pulled above the knees over the stockings. One day was given to the accomplishment of this task, which seemed to offer little difficulty after the unbuttoning was learned.

To teach this type of child to button her clothing required from one to three days but no new work was given for two weeks. The essential feature is repetition of the same movements, to repeat so constantly that the act becomes habitual.

Tying the shoe-lace is taught before lacing the shoe. A piece of board 14 inches by 2 inches, with a block of wood about two inches square nailed at one end to the longer board, is used to accomplish this. The two-inch block represents the ankle. The laces are tacked in place around the block end in such a position as will enable the child to start in exactly the same way as she would were she lacing her shoe. Tying the bow is most effectively taught when the teacher stands over the child, and step by step, places her hands in each new position necessary for tying. These first movements are usually very difficult, since the mind of the idiot or imbecile does not react or control the muscle movements to any extent.

Now, lacing the shoes becomes an easy matter. Shoes are clamped on the tables and the children instructed individually. They find it hard to know which lace to pick up after one has been laid down. Both strings are held until each has been used, then both of them dropped and the same process repeated until all eyelets have been laced. This repetition finally becomes mechanical. It took as long as four weeks with individual instruction each day to complete the instruction. After that length of time the help of the instructor was no longer needed.

At our institution, shoes, night-gowns, and dresses are labeled, and in order that these low grade children have sufficient power to select their own garments, it is necessary that they recognize their

names. Accordingly, the latter were printed or written on tapes corresponding to those sewed on the clothing. Each child was taken to the desk and shown her name. By habitually repeating the act she learned to recognize the first and last letters, or a combination of letters which attracted her attention. Later she was encouraged to select her tape from among several. Finally the same was done with all names of members of the class. Sometimes as many as six or eight tapes of one particular child would be arranged on the table with the others, and invariably the child selected all her own names. The instructor who had worked with long continued patience and perseverance, observed that these children were emotional and susceptible to praise, and thereupon highly commended the successful. After five months of such practice, 47 could select their own, out of any number of names placed before them. Intentionally this work was discontinued for eight months. Out of mere curiosity, we re-tested, the second situation being identically the same as the first. Only three were unable to repeat the experience.

Knowing that the children could recognize names, we felt certain that they would likewise have the ability to select individual letters of the alphabet. Our buildings are designated by letter, not named, and then, too, this would be useful in the laundry, where the sorting of hand towels and other linen, as they come from the mangle, is necessary.

Cards containing eight bright colored letters each about two inches high, were made, together with corresponding single letters. The latter, being arranged again, were sorted and placed on the corresponding letter of the cardboard. Great difficulty was experienced especially with the E and F, the C and G, and the M and W. This was due to the fact that a different phase of the first experience was presented. Consequently, the idiot and imbecile type did not know how to act because of her inability to recognize similarities. She had not been trained previously to solve exactly the same kind of a problem and therefore could not adapt herself to a new situation.

Passing the fingers over the letters so as to distinguish the differences in form, aided those children to whom this suggestion was presented, to sort much more easily than those who had not attempted to do it in this manner.

Explicit instructions as to the difference in E and F were given. The E had a mark or line on the bottom that the F did not have. The words "mark" and "line," however, meant nothing and so our efforts along that line were fruitless. Finally the construction of the letters was explained by the use of sticks of wood. A stick represented something to the child and she understood clearly now what was meant when told that the E stood on an extra stick at the bottom of the letter while the F did not.

At times the W was confused with the M. This was made clear by saying that the sticks on the outside of M "stand straight" while those in the W "lean over" from the bottom. She easily comprehended the difference in form between the C and O when informed that the former letter had a path running into it, while the latter had none. The G like the C has a path but a stick lies in the path. Q and O resemble each other very much, the only difference being in the stick that runs into the Q.

By relating these letters to the child's own experiences, the response was found to be much greater than it otherwise would have been. Sixty idiots and imbeciles were trained. Note the results.

Mental age	To Sort Letters			To Recognize Names		
	Taught	Succeeded	Failed	Taught	Succeeded	Failed
Below 2 yrs.	2	1	1	2	1	1
2 yrs. to 2 yrs. 11 mos.	12	4	8	12	4	8
3 yrs. to 3 yrs. 11 mos.	9	8	1	9	7	2
4 yrs. to 4 yrs. 11 mos.	14	13	1	14	13	1
5 yrs. to 5 yrs. 11 mos.	12	12	..	12	12	..
6 yrs. to 6 yrs. 11 mos.	10	10	..	10	10	..
8 yrs. to 8 yrs. 11 mos.	1	..	1	1	..	1
Total	60	48	12	60	47	13

After the above results were accomplished, the training was dropped for a period of 10 months. A test at the expiration of that time was most gratifying. Only 11 confused the letters E and F.

The most important work taught in the class is untwisting coire yarn, which is used in making mats. This is of much value in that it is a preparation for the finer work that is to follow. The stiffness of the yarn renders it useless unless unraveled, and considerable force must be used in the unrolling. The most beneficial exercise

for making the fingers more nimble and pliable consists of opening and closing the hand, spreading the fingers apart, and flexing the thumb to meet the little finger. A rolling of the thumb across the other fingers is thus started. The yarn is made into mats and for the first time the child shows a real interest in the finished product of her work. It takes as long as two months to learn to unravel well.

Immediately succeeding the untwisting of coire rope, the child is put to sewing carpet-rags, which calls for finger movements different from those previously taught. It is an arduous task to check her from breaking the needle and the thread. She tears and fringes the rags. Perhaps the most effective way to remedy this last evil is to show her the result of such faulty work—the finished product—the poor, loom woven rug.

The braid weave rug, woven on both sides of a frame is valuable training in that the child must learn to alternate the weavers.

In the making of coire yarn of cocoa door mats, a stick placed across the frame in such a position as to be horizontal to the warp, insures more accurate results. Its usefulness lies in the fact that it enables the child to keep the mats straight. The stick is clamped on and may be moved when necessary, with little or no trouble. Before we experimented with this device, many of the mats were wider at the top than at the bottom.

Any low grade child who has learned to sew small and even stitches can easily be taught to make the Persian oriental rug. She cannot, however, lay her design. This is done by helpers (high grade morons). Up to this time, all the practical finger movements have been taught step by step, but this low type is ever ready to give up absolutely. She is incapable of adjusting her thinking to new requirements, and when she sees something large or beautiful or complicated, fear seems to take possession of her. She cannot be induced to adapt herself to a more complex situation. Though her stitches are perfect under supervision, when left quite by herself, she is nonplussed. She will drop the new work and beg to return to the old. This difficulty necessitates the doing by that child of something which she has an aversion for. A desire to turn from work disagreeable to her will give her more determination to produce that which is required of her. It is probable that her poverty of thought and experience will cause her to give up again and again. By continuing to be firm in the face of discouragements, and

by keeping the child at each step in the work until she thoroughly understands it, the instructor finally impels her to produce a beautiful finished article.

Color is not taught as a special study. It is in the course of rug making that color distinction is brought out.

To teach knitting it is absolutely essential to place the child's hands into those of the instructor. She learns the motion of the stitch until it becomes a mechanical process. After proper teaching she realizes that when the rough surface is toward her she must purl, and when the plain surface is toward her she must do plain knitting. In the beginning many stitches are dropped, but the child is encouraged to watch for them, and to bring the work immediately to the instructor to pick them up. Should she neglect to do this, the sweater or cap is unraveled, regardless of how much time and effort have been spent on them. This cautions her against carelessness.

From knitting the child is usually placed at crocheting. It is a most profitable industry inasmuch as laundry bags, made of seine twine, are in great demand at our institution. Crocheting consists of a more complicated finger action than had been given in previous training, and is applied to one hand at a time. While the child holds the thread in her left hand, the helper or instructor crochets with her right hand.

A few of our children could not possibly accomplish this undertaking in less than two months' training. The possible explanation is that they had a feeling of more inferiority than others, attributable to the fact that various kinds of work were given them during the course of the day. Consequently they became discouraged and realizing that all faith in their ability was lost, sank back into their world of inferiority.

The weaving of towels and sewing on the machine calls for a new movement—the pedalling of the feet. Proper coordination of hands and feet must be effected. As a preliminary exercise the child is seated, or laid on its back, and her feet moved in such a way that the motion corresponds to that of the sewing machine. When she acquires the motion that is needed in operating it, she is placed at the unthreaded machine. Later she learns how to sew a straight seam. Turning corners seems to be a troublesome problem to her but in time she is successful.

Plain weaving is taught in the same manner, and our children weave a large part of the toweling needed for the institution.

Kelim rugs are made of carpet wool with a diagonal stitch on basket canvas. They are the most difficult rugs to make and mean months of zealous energy and urgent teaching on the part of the teacher. The instructor finds it helpful to impress on the mind of her pupil that the small holes are needle holes and that the opening through which the yarn came last is the string hole. With about four months' training she will need no help except with the color scheme. Excellent results have been obtained in this line of work.

In making hook rugs, the child follows the strand of the burlap. For anyone below five years mentally, it is rather difficult. Very often when a rug is almost finished the pupil will break the strands or deliberately cut a hole in it. The wise teacher in her training and care and control of the defective, whose habits are persistent, will insist upon the formation of such habits as are useful and not destructive. The mental defective will form habits easily, but changes them with much reluctance. The same punishment is advocated here as was recommended in making the Persian rug.

Beautiful results have been obtained in lace making. The lace is made on pillows, and from 12 to 46 bobbins of thread are manipulated by the child, the number depending upon the width. The girls who devote time to it learn to realize that carefulness is the chief requisite in getting first class work.

The 20 months' training given this low grade type has done one important thing. It has kept busy the child who heretofore had no place in the routine of institutional life, and who was left sitting about the dayroom or playground, socially and industrially helpless and hopeless. In addition to this, it has been of value in that it has contributed to materials used in the institution—door mats, sweaters, gloves, laundry bags, toweling, lace and various kinds of rugs. Thus they have actually become producers and are less of a problem.

Articles	Quantity produced within 20 months
Caps	332
Sweaters	82
Boys' work gloves, pairs	550
Laundry bags	138
Toweling, yards	1,815
Lace, yards	40

Articles	Quantity produced within 20 months
Coire yarn mats	20
Persian rugs	10
Persian coverings for foot stools.....	2
Braid weave rugs	202
Woven rag rugs	202
Crochet rugs	12
Kelim rugs	10
Kelim pillow covers	2
Hook rugs	22
Bath mats	7
Scrubbing brushes	100
Embroidering work, pieces	68

The group plays with a better spirit, showing a kindlier feeling to each other and to those in charge, and taking a larger interest in surroundings. Not only do these girls keep themselves looking neater but they help themselves in their respective cottages. They are cleaner and have come out of their world of inferiority, earnestly endeavoring to imitate the brighter girls. They are less of a burden to themselves and others. Before this training they wet and soiled themselves despite the time allowed in the cottages for taking care of themselves. Now we are called upon to ascertain whether or not it is necessary that they be excused from class. We have discovered that they ask to leave the room as an excuse for getting away from work. This probably accounts in a larger measure for the elimination of a habit which was so marked at first entrance to class.

HABIT IMPROVEMENT

	Before entrance to class	At present
Wet	29	3
Soiled	12	..

The tabulated data below is of great interest and shows how much can be done with this low grade type, that heretofore sat for hours without making a sound or who carried on some work of destruction.

PROGRESS TABLE

	Number taught	Number who succeeded	Number who failed
To button	139	139	..
To unbutton	139	139	..
To dress	91	91	..
To undress	91	91	..
To tie bow	139	137	2
To lace shoe	139	134	5
To recognize names	60	47	13
To sort letters	60	48	12
To fringe	135	134	1
To sew carpet rags	128	124	4
To braid weave rugs	29	28	1
To make Coire yarn mats.....	30	27	3
To make Persian rugs	32	28	4
To knit (plain)	23	22	1
To knit (purl)	18	17	1
To crochet	23	19	4
To weave on loom	11	11	..
To weave with needle	13	11	2
To sew on machine	9	9	..
To make Kelim rugs.....	18	17	1
To hook rugs	15	15	..
To sort colors	43	43	..
To make lace	5	5	..

Though the same interest was taken in each child, and the same untiring and definite efforts put forth in her training, we have been unsuccessful in developing the capacity for useful and productive industrial work in a few cases. The progress of the majority, however, has been good.

Fatigue always enters in as a great factor at first, but, by constantly increasing the period of training each day until the whole day is used, the child soon shows no evidence of the characteristic fatigue. No actual rest period was given this group, because of the disadvantage of the help problem. The child was often kept waiting for the instructor to give the individual attention necessary to carry on her work, and therefore, if she did feel fatigued after a period of effort, opportunity to rest was at this time afforded her.

From a study of this group of children, Miss Blanche M. Minogue, psychologist at Letchworth Village, makes the following report:

PSYCHOLOGICAL REPORT

After a few months of training in the special industrial class the outward change in most of the patients was so noticeable that it seems inevitable that there should be some change in mentality. Consequently, the psychologist first attempted to determine how much this training had affected intelligence ratings. It was obvious that for purposes of this study the cases selected for examination must be those who had had a fair trial in the class. Of the 50 girls selected 40 were chosen because they had been under training for more than a year and the remaining 10 had all been in the class at least six months and had shown very marked improvement during that time. A comparison of the results of re-examination with the scores of the tests made just prior to entering the class brought out the following facts: 41 cases, or 82 per cent, showed an I. Q. constant within 5 points; 9 cases, or 18 per cent, showed an I. Q. change of more than 5 points.

The change in every case was a loss rather than a gain. The greatest loss was 11 points. This occurred in the case of a markedly psychopathic patient whose instability made an accurate test impossible. In one other case the test was inaccurate because of patient's instability and in two cases the children had shown a steady deterioration in I. Q. for several years past—which the training in the class had not altered. From all this we feel safe in concluding that the training has had no effect on Terman test scores.

The 50 girls tested were rated by the instructor, Miss Steffey, according to their progress in the class as markedly improved, slightly improved, or unimproved. These three groups were then studied from the standpoint of chronological age, mental age, and change in I. Q. The results are as follows:

Group	Range of chronological ages	Median chronological age	Range of mental ages	Median mental age	No change in I. Q.	Loss in I. Q.
Markedly improved..	7 yrs. to 22 yrs.	13-2	2-6	4	23	7
Slightly improved....	11 yrs. to 24 yrs.	13-9	2-6	3-4	8	1
Unimproved	7 yrs. to 25 yrs.	17-6	2-5	4-2	10	1

It can readily be seen that the three groups show no appreciable difference in I. Q. changes or in mental age. There is, however, a difference of 4 years between the median chronological ages of the two improved groups and the unimproved. It is interesting also

that of the 11 patients constituting the unimproved division 6 showed an introverted personality and 4 a marked emotional instability. Of the remaining 39 patients, all of whom had shown some improvement in their work, but 7 evidenced definite instability. Only one of these was classed in the markedly improved group. This suggests that youth and emotional stability facilitate training, at least in a large class.

The question of performance tests come up next. The girls in this class are so low in intelligence that the usual performance tests could not be used for rating them. Five tests were finally selected from the Pintner-Patterson scale: The mare and foal test, the manikin, the Knox cubes, the adaptation board, and the Goddard form board. These were given to each patient in the order named. They were scored as usual and performance medians figured from the results. It is obvious that since only the easiest tests of the scale were used these medians cannot be considered comparable to scores on the complete Pintner-Patterson scale. They do, however, furnish a satisfactory means of comparing the two groups—improved and unimproved in the industrial class.

Ten of the 11 unimproved patients were available for the performance testing. The instructor was asked to select the 11 girls showing the greatest improvement and they were likewise given these five tests. The scores of the unimproved group varied from 0 to 5 years, with a median of 2 years 6 months. The improved group show scores ranging from less than 1 year to 7 years, the median here being 5 years 4 months.

Since the two groups given performance tests consisted of only 10 subjects each there was a possibility of a difference in Terman levels which might affect performance scores. Upon investigation, however, there appeared no important difference, the range of mental ages being from 2 to 5 in both groups. The improved patients had a median mental age of 3 years 8 months, and the unimproved a median of 4 years. It is interesting that a difference of two years was found in the chronological ages, the improved group having a median age of 14 years, the unimproved a median of 16 years. Thus the difference of three years in the performance medians is noteworthy. Perhaps the girls who have so far failed to progress are mysteriously lacking in "manual ability" or if the other factors, perhaps of personality, operate alike to produce both low accomplishment and poor performance test scores.

SUMMARY OF PSYCHOLOGICAL REPORT

1. The training in the special industrial class has had no effect upon intelligence as measured by the Terman test.
2. Those subjects who have improved in class work show no difference in mental age or in constancy of I. Q. from the unimproved patients.
3. The improved group have a median chronological age four years lower than the unimproved.
4. The improved patients present much less emotional instability than those who did not progress.
5. The 10 subjects who made the greatest advancement in the class scored on five simple performance tests a median three years above that of the 10 poorest subjects.
6. In the industrial training of low grade defective girls the training appears to have no effect upon the patient's intelligence test level. Nor, on the other hand, does the success of an individual in a class of this type depend upon mental age. It would seem, however, that the younger and more stable patients are more likely to prove successful in a large class than the older and more unstable. There may also be some connection between success and actual manual dexterity.

CONCLUSIONS

Many people look upon the idiot and imbecile as the most helpless of human beings. While it is true that they experience great difficulty in connecting, by natural association, the few ideas they possess with impulses, nevertheless they can be trained to perform quite difficult tasks.

The experiment that we have been carrying on for the past 20 months, unquestionably assures us that in the training of the idiot girl it is needless to make any attempts at improvement unless the instructor gets down to her plane.

The idiot and imbecile lack constructive imagination to a very large degree. They are capable of making only a few associations of the most simple nature, and those resulting from identical experiences. Thus their training involves not only laborious but continuous effort in taking them away from their world of inferiority and giving them greater contact with their outside world.

With training they become better social beings. They have

become producers, supplying many of the worthwhile articles needed by others. They have actually come to realize that they are not utterly useless but a part of the genuine life of the little community in which they are living. They are more interested in their play and surroundings, and have manifested a kindlier feeling to their companions. Not only has their personal appearance been markedly improved but sex habits and the wetting and soiling of the clothing have likewise been eliminated to a large degree.

A SUGGESTION OF THE THERAPEUTIC VALUE OF GLUCOSE BASED ON INVESTIGATION OF CARBOHYDRATE METABOLISM OF THE FEEBLEMINDED*

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About two years ago when we first undertook the study of the problem of mental deficiency from a laboratory standpoint, we did not have any idea what particular line of laboratory investigation was the most profitable to pursue, nor did we know what laboratory tests should be applied and could be applied to the kind of patients, who, presumably, were not cooperative, and therefore, hard to deal with. We could not find in the literature any reports of laboratory work done on mental defectives. Even the simplest routine tests had not been done on any large groups of defectives. Hence we did not even know what the normal standards of urinalysis, blood counts, blood chemistry, etc., for the physically-normal defectives were. Therefore, it was deemed advisable to accumulate data that would establish a foundation for further investigation.

Eventually we expect to report on various tests which have already been done often enough to establish standards for mental defectives. Meanwhile the nature of these data now on hand already creates advanced laboratory and clinical problems and even suggests some ideas which might be helpful in the management and treatment of our patients. It appeared advisable to make this preliminary communication which deals with a therapeutic suggestion, because we hope in this way to get constructive criticism and cooperation in the clinical checking of the suggestion.

It is generally accepted that the resistance of mental defectives to the different infections is lower than that of normals. Even minor injuries without any apparent complication often do not heal as readily as they usually do in normals. And yet this retardation in the healing process is accompanied neither by any apparent signs of generalization nor by any especially marked local reaction, both of which if present would account for the delayed recovery.

During the cold season of the year in any group of patients in our institution there are a certain number cases with minor sores on their fingers or toes. The involved area is painful and tender and appears cyanotic, swollen and may, or may not be accompanied by a limited ulceration. If ulceration is present there is a scant mucopurulent or serous discharge. No matter what the treatment

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is, the inflammation develops slowly, temporarily subsides, then again increases, breaks down and closes again. Such sores last for two, three, or more months. Eventually, mostly with the oncoming of the warm season, the process heals up only to reappear the next cold season, on the same or another extremity.

The process of inflammation consists of a reaction of an organism to some sort of injury. There is no difference in the injuries that a mental defective is exposed to, as compared with the injuries that another human being may be exposed to. Therefore, the difference in the course of the inflammatory reaction apparently must depend upon the peculiarities of the reacting organism or in this instance upon the entire make-up of the defective. The whole make-up and general metabolism of a human being may be looked upon, to some extent at least, as respectively the static and dynamic phases of the same phenomenon. Therefore, it is the metabolic process of mental defectives that might afford the explanation for this retardation in the healing process.

General metabolism takes an essential part in any process, accompanied by disintegration of bodily cells. It is especially so when products of inflammation have to be absorbed and subsequently eliminated through the channels of the metabolic mechanism. An illustration of this is represented by the clinical course of lobar pneumonia in which practically the whole bloody, mucopurulent exudate is digested and absorbed from alveoles by the process of general metabolism. Therefore it is not surprising that we find in the urine for instance, an increase of some substances produced by an inflammatory disintegration.

One kind of products of disintegration of bodily cells is a part of urinary reducing substances that are often discussed under the name "urinary sugar." Our sugar test is based mostly on the phenomenon of reduction of copper sulphate by sugars and adjusted to show, so to say, pathological quantity of the sugar in urine. At the same time more sensitive adjustments of the test are devised for the purpose of estimating so-called "physiological" urinary sugar that can be shown in any specimen of any urine. These copper sulphate reagents react with glucose and closely related other simple sugars, so-called monosaccharids. The tests do not react with the more complex sugars, so-called polysaccharids. But these complex sugars are present in the urine as derivatives of food as well as products of disintegration of bodily cells. By boiling the urine with acid—by hydrolysis, to use the proper chemical term—these complex sugars are split into simple sugars that do

react to ordinary sugar tests. Therefore, estimating sugar in urine as it was collected, then hydrolysing the urine and repeating the sugar estimation, we practically always find an additional quantity of the reducing substances. In this paper we shall deal with this additional part of urinary reducing substances and we shall refer to it under the name post-hydrolysis reducing substances.

Post-hydrolysis reducing substances are calorically valuable but difficult to assimilate. They are thrown out into the urine, generally speaking, because of the presence of an abundance of more easily assimilable sugars or because of a failure of the metabolic mechanism. The first situation we meet in mental normals, and it has been shown by Folin and others that the post-hydrolysis reducing substances of the urine are increased in quantity in the presence of a rich carbohydrate diet. With mental defectives the usual quantity of carbohydrates in the diet is apparently insufficient for their peculiar metabolic mechanism because when a considerable part of the carbohydrates of their customary high carbohydrate diet was substituted by a calorically equivalent quantity of proteins, there was a grave loss in their body weight. At the same time the elimination of the post-hydrolysis reducing substances in the urine was increased. This is just the reverse of what happens with mental normals. These observations on defectives were discussed in detail at the Toronto meeting of the American Association for the Study of Mental Deficiency in our communication entitled "Glycuresis in Mental Defectives."

We inferred therefore, that mental defectives require a large quantity of carbohydrates for their nutritional standards to compensate for their impaired metabolism. Apparently the metabolic mechanism of defectives has to make an extreme effort to meet ordinary requirements.

Now what will happen if the metabolic mechanism of a defective is called upon to take care of an increased disintegration of bodily cells that comes with any inflammation? We must expect that the products of disintegration instead of being properly metabolized will be harbored within the tissues and thus retard the healing process shown in the urine as post-hydrolysis sugars. Therefore, we may infer that the administration of glucose which increases the glucose circulating within the metabolic channels must be of therapeutic value in the retarded inflammatory processes of mental defectives.

The conception just presented, I believe, is logically constructed, but the only way of proving it is the clinical check of this theoretical,

partly speculative idea of therapeutic value of glucose in cases of retarded healing of minor inflammatory processes. At the present time I have two cases to report.

Case I. R. J., 11-year-old boy with M. A., 2 years and 7 months. I. Q. 5, a typical Mongolian idiot. On February 15, 1926, the patient was admitted to our hospital with a fractured ulna and made an uneventful recovery. While in the hospital the toes of the left foot became red, swollen, painful and tender. On March 10, the patient was put to bed. All sorts of local applications were used. The condition did not improve and finally the third toe became ulcerated. More than a month after the beginning of the condition, on March 18, the toe was lanced. No improvement followed. All this time the temperature was normal, general condition, disposition, appetite very good.

On June 1, 1926, our attention was called to the case and observation was started. The toe at the time was slightly swollen, cyanotic, with a small $\frac{1}{2}$ cm in diameter ulceration over the tip involving nail area, and nail almost completely disappeared. X-ray of the toe done at the time reads, "Terminal phalanx of third toe gone." General health good. The patient had no complaints, and apparently felt quite well. The inflammation of the toe had lasted more than three months at this time.

No treatment was applied for 14 days. The toe was kept dressed in gauze with some vaseline on it to avoid sticking of the gauze to the ulcerated area. Hence we had an adequate control period. No change in the condition was noticed during this control period. Average of urinary post-hydrolysis reducing substances within this period was 142 mg. per 24 hours. On June 14, glucose, 50 gm., per day orally was ordered. On June 19, five days after glucose was ordered, daily note reads "Crust removed, perfect healing with prima intention. Nail is growing anew." Dressings were discontinued. Patient was ordered out of bed. Average of primary post-hydrolysis reducing substances within this five-day period of accelerated healing—163 mg. per 24 hours, 21 mg. higher than during control period. This is just what is expected to happen when the general metabolism takes its proper part in evacuating the products of disintegration of the bodily cells accompanying the healing process.

After healing glucose administration was continued for seven days with the result that the urinary post-hydrolysis substances were decreased to the average of 114 mg., per 24 hours. Then followed seven days of further observation, the glucose had been

discontinued on June 27, with a still further decreasing quantity of post-hydrolysis sugars in urine—102 mg. per day.

On July 4, the patient was allowed to go home for a vacation with his parents. At the present time the patient has returned from his vacation and his toe has been in perfect condition all the time. (September 15.)

Summary of the case: Five days glucose treatment resulted in perfect healing of a minor inflammatory process that lasted for four months without any improvement in spite of all sort of local treatment.

Cass II. Will be reported briefly. L. F., 18-year-old girl with mental age of 7 years that makes her I. Q. 44. She was born as a premature 7 months baby, 11 days after mother's fall. No nervous or mental defects on either side of the family for three generations. The parents are first cousins, and patient's brother is in an ungraded class.

The patient is fairly developed, well nourished but has spastic paresis of both legs with Babinsky present on both feet.

On August 5, 1926, she was sent to the hospital on my service with Dr. Veith's note as follows: "On February, 1926, the patient complained of pain in the fourth toe of the right foot. The toe was painful, swollen, cyanotic for about three weeks and then broke down; scant discharge of pus but no definitely localized process. It took about six weeks to heal. Used salt and water, then alcohol dressing. After healing the toe stayed swollen and cyanotic for about one month and then became normal."

Patient's toe became swollen, cyanotic and painful again three weeks ago. In the hospital she underwent treatment as follows. No treatment for 12 days; no improvement. Then under 50 gr. glucose per day orally the inflammatory process subsided and healed within 10 days. During these 10 days the old nail of the toe came off and a new one appeared. The condition has not reappeared up to the present time which is about one month after healing.

SUMMARY

The metabolic mechanism of mental defectives is impaired to some extent. Their impairment has been shown by their peculiar handling of certain substances which are derived from both food and disintegration of bodily cells and are the source for the after-hydrolysis fraction of urinary reducing substances. The high carbohydrate diet, resulting in an increased quantity of glucose circulating within the metabolic channels, appears to compensate

for the impairment mentioned above. Therefore, the customary high carbohydrate diet of institutions for feeble-minded is to be regarded not as a matter of a chance or administrative economy, but as an automatically established way of meeting the metabolic peculiarity of the kind of patients cared for. Inflammation is always accompanied by increased disintegration of body cells which raises the demand for metabolic efficiency. Therefore, the administration of glucose in cases with retarded healing might be of therapeutic value because it induces an adequate handling of the products of cell disintegration. This conception has been checked up on two clinical cases with promising results.

CONCLUSION

The aim of this preliminary paper on this question is to call attention of the profession to the matter, ask for a constructive criticism of our conception, and obtain the necessary cooperation in checking it up on a large number of clinical cases. It is our opinion that a theory of this sort can be proven or disproven only after an adequate clinical check.

THE DEFECTIVE DELINQUENT AS A STATE PROBLEM

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The inference made in the title of this discussion is, that there is a more or less distinct type of individual of delinquent tendencies, who possesses characteristics peculiar to himself and who, because of his peculiarities, demands special attention from those who are responsible for the care of the State's social problems. This paper has for its purpose, the definition of the defective delinquent, and as well, his management in the light of what we now know about him.

Who is the defective delinquent? He is that offending member of society, who upon examination, shows an appreciable limitation of responsibility, due to mental deficiency. In order that there shall be no misconception of the designation "mental deficiency" it may be well at this point to interject briefly that the term implies the lack of capacity in an individual to understand what is perceived by others; the lack of capacity to be able to act in such a manner as to achieve what one is striving for; and the lack of capacity to make correct combinations of new material, or in other words, logical power and phantasy—all of these functions being dependent on the number of possible associations. From the foregoing, it will at once be evident that the mentally deficient person faces impossibilities from the very beginning of his social existence. Intelligent achievement depends upon the proper selection of material to be associated—whereas irrelevant association is common to the feeble-minded, and because of his inability to associate freely and logically, he is handicapped. His concepts are insufficient, unclear, and have inaccurate limitations. He does not form complicated abstract ideas and frequently his abstract concepts are falsely construed. Differences in the intelligence levels of the feeble-minded group, depend on the increase in the possible number of associations and their lesser or greater independence of emotional inhibitions. How then does the defective delinquent differ from the socially adjusted defective? The difference is comparable to poorly and well behaved children, and depends upon several factors, chief among which are personality, environment, supervision and constitution. The comparison, we believe, is analogous, for, after all, the feeble-minded are the children of the race, and like children, they are more or less creatures of impulse.

Let us consider the characteristics of the defective delinquent as a group, and it will become evident that we are dealing with a

specific type, and at the same time, a problem of no little importance. In a recent study of over 500 cases in the New York State Institution for Defective Delinquents, analysis was made of the intelligence levels, personalities, delinquent habits, and delinquent tendencies. It was found that the median mental age was 9.19 years by the Terman revision of the Binet-Simon psychometric test. In this group there occurred the following distribution: Borderline cases, 23; morons, 366; imbeciles, 150; idiots, 1; total, 540. Further analysis of this group showed that the median performance capacity in years by the Pitner Patterson tests was 9.3 years. In the subsequent psychiatric study of the same group, it was shown that the group could quite readily be divided into three sub-groups. The first consisted of those with a mental age above 11.2 years, in which it was evident that the intelligence defect had ceased to be prominent, and that the predominating factor was that of personality and conduct disorder. In the second sub-group we found essential characteristics which were sufficiently constant to denote a definite type, which we have chosen to call the true defective delinquent, the upper limit of intelligence being 11.2 years, with the lower limit lying approximately between six and seven years. Below this latter limit was a group composed of palpably feeble-minded persons, who might preferably be termed delinquent defectives, because of the predominance of mental defect as compared to delinquent tendencies.

Of this group of 540 cases, 62.6 per cent were classed as *habitual* offenders, having been arrested and placed on probation or committed to an institution at least three (3) times previously; 23.9 per cent were classed as *occasional* offenders; 12 per cent were *first* offenders, and 1 per cent were shown to be *accidental* offenders. The crimes for which this group were responsible were: Larceny, 30.7 per cent; burglary, 21.7 per cent; other crimes, 13.1 per cent; robbery, 9.8 per cent; assault, 7.6 per cent; homicide, 5.4 per cent; rape, 5.4 per cent; sodomy, 5.4 per cent. Note that 62.6 per cent of the offenses were of an acquisitive nature; 13 per cent were against person, and 10.8 per cent were of a sexual nature.

Efforts were then made to analyze the personalities of the individuals in the group, and although differences occurred, there was enough similarity in the make-up and reaction of the persons studied to denote a constancy of certain outstanding features, involving the conduct and emotionality. Eighty-five per cent showed the characteristic reactions of the psychopathic personality. Abnormal behavior and temperamental disorders are found to have

been noted in the childhood of these individuals—exhibiting themselves in abnormal moods, stubbornness and irritability. The school period is characterized by similar reactions in a more accentuated form, and in addition there is noted lack of ambition, ready fatigability of attention, rapidly changing interests, insubordination, frequent flight from the responsibilities of the school rooms by way of truancy. They become rebellious under supervision, are hyper-susceptible to unfavorable suggestions, and readily turn to lying, thievery, and other compensatory activities, whereby they attempt to gain, by anti-social pursuits, the admiration of their companions which cannot be gained in the school room, because of their delimited capacities. Arrests for truancy and thievery are usual sequelae. The industrial history of the majority of the group is almost typical. Here again quick fatigability of attention, poorly sustained ambition and disregard of the future, with lack of planning ability, unite to promote general industrial restlessness and economic dependence. They are the industrial floaters, habitués of pool rooms, amusement parks, gymnasiums, etc., where they devote their time to the pursuits of pleasure and in disregard of their obligation to society. They are quick to react against organized efforts and appear to be deeply conditioned in a state of general dissatisfaction against the social order of things.

So much for the personality reactions in the community. In the institution they are unreliable, unstable emotionally, untruthful, selfish, lacking in honor with their fellow inmates, show no initiative, are lacking in sentiment, frequently boastful and in general are found lacking in the attributes which make up the constitution of the socially standardized personality.

In concluding a brief description of the general mental and personality make-up of the defective delinquent, we might summarize by saying that:

(1) The median mental age of the group is 9.1 years—with upper mental age limit of 11.2 years and lower limit between 6 and 7 years.

(2) That 85 per cent of the group show definite symptoms of psychopathy.

(3) That at least 60 per cent are habitual offenders.

(4) Because of peculiarities of personality and subnormal intelligence, they are not susceptible to the usual reformatory efforts of the regular correctional institution.

The question of prevalence of the feeble-minded delinquent arises and may be answered by disclosing figures gathered here and there

during the past two years, which show that an average of 35 per cent of the inmates of our correctional institutions are definitely defective. This percentage may at first appear rather high, but when we consider that a large majority of inmates of the major correctional institutions have graduated from probation, juvenile correctional institutions, etc., into reformatory and prison, it becomes evident that either one of two things is at fault: The individual is incapable of profiting by experience, or the system is wrong. Frequently there is a combination of the two difficulties.

In New York State the average population of major correctional institutions is in round figures 7,000 inmates, and if our deductions are correct, upwards of 2,400 of these inmates are mentally abnormal. The New York State Institution for Defective Delinquents, with a rated capacity of 496, is now caring for 600 feeble-minded offenders. What then of the balance of this group? Institutional executives are fast recognizing that their problem inmates are not simply "lazy"—"good for nothing"—"plainly troublesome" people, but that they are abnormal as compared with the average so-called normal inmate. Our own knowledge of the limitations of the defective delinquent, makes it obvious that training and discipline planned for and suitable to those of supposed normal mentality, is at once inadequate and improper for the reformation and restoration to society of an economically independent feeble-minded individual.

It is unnecessary to discuss in detail the difficulties of administration in a population whose mental capacities range from normal to imbecile, but it is conceded that the more homogeneous the group the greater the success, and that any effort will be limited by the possibilities of the group being handled.

In view of the foregoing, it is apparent that the defective delinquent receives insufficient preparation, in the usual correctional institution, for his return to society, and that society would best be served, if he were segregated on an indefinite basis for specialized training and treatment. In an environment of this type, his personality difficulties may be studied and future efforts directed towards the prevention of a repetition of his previous maladaptations—next his abilities should be determined and efforts made to develop them to the fullest extent. We cannot hope to make skilled mechanics and artisans, but by taking into account his limitations, we are more apt to promote a better industrial adjustment. There then arises the question of discipline, and because of the erratic impulsive, in fact almost primitive nature, of the conduct of the defective delin-

quent, this is no small problem. Routine that is suitable for the inmate of nearly normal intelligence, forethought and judgment, is quite unsuitable for one who is unreliable, selfish, unthinking, and emotionally unstable. Only by careful study of the individual can he be properly placed within the institution and trained in social responsibility.

How can we know whether our inmate is profiting by his training and how shall we know when he is socially fit to leave the atmosphere of controlled environment? Observation and prognosis can only be based on the results of psychiatric study, for we are dealing with a definite mental problem involving the intellectual status of the defective, and as well, his personality and behavior. Our observations will determine the course to be followed in the individual case, and should the results be unfavorable, fortunately for society, another one of its enemies is not turned loose simply because a date has been turned upon the calendar.

There is no need to delay further in arriving at a conclusion. It is clearly established that the defective delinquent presents not only subnormality of intelligence, but that he suffers from personality disorder, and shows anti-social conduct deviations—that he occurs in the proportion of at least 35 in every 100 inmates of our correctional institutions, and that because he is abnormal he is not susceptible to training intended for the normal.

The solution obviously must be found in the following lines of action: (1) By increasing the facilities for personality study of the entire criminal or delinquent group so that the defective delinquents may be properly segregated. (2) By making provisions for their proper detention over an indefinite period (for no one can foresee how long or how short a period of training will be required). (3) By increasing the State's facilities for handling this large group, keeping in mind that the borderline cases may succeed in regular correctional institutional environment, and that those individuals with mental ages below 6 years would be best cared for in the usual institution for the feeble-minded.

Fortunately New York State has led the world in progressive criminology in the establishment of the Institution for Defective Delinquents, and this with the establishment of the new psychiatric classification clinic at Sing Sing, would indicate that our State bids fair to continue along progressive lines and place criminology and penology on a firmly scientific and practical basis.

INADEQUATE CHILDHOOD TRAINING, A FACTOR IN MENTAL DISEASE

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Much time and energy have been devoted to the study of the socially unfit in an endeavor to determine the factors which cause individuals to conduct themselves in such a manner that they become objectionable to society as a whole. We have learned the etiology of a majority of the organic psychoses, and know the causes we are able to warn the public against those agencies, especially alcohol and syphilis, which bring about organic changes in the nervous system with resulting impairment of the mental faculties.

When we turn to the so-called functional group, which comprises more than 50 per cent of the cases of mental illness, and into which category we might classify many of the socially unfit commonly termed criminals, we are in many of the cases, unable to postulate the underlying etiological factors. This group has been the subject of persistent and untiring study and investigation in an effort to establish a definite etiology for the various types composing it.

The relation of heredity to functional psychoses has been the subject of thorough investigation and the conclusions drawn by a majority of the more competent observers indicates that outside of the realm of mental defect heredity plays little or no part in mental development excepting as it influences the environment of the child.

A small number of observers are inclined to attribute many of the cases regularly placed in the functional group to focal infections, but a considerable number of these patients after the most careful examination show no foci of infection. In those cases in which infection is found and removed, there often is no appreciable improvement in the mental condition. While there can be no question but that we should be ever alert to the possibility of the presence of foci of infection, and should take every means to bring about their removal and to place those who are mentally ill in the best physical condition; nevertheless, we cannot look upon the theory of focal infections as solving the question of the etiology of the functional nervous disorders.

Much work has been done on the endocrines in an attempt to

establish some relationship between endocrine disturbance and the various forms of mental disease. While many interesting facts have been noted, we are as yet unable to say definitely that endocrine disorder is an etiological factor in that group of mental diseases generally considered as inorganic. Investigation of the endocrines should be continued in the hope that something of material value will eventually be found.

During recent years we have come to associate individuals showing anti-social conduct without evidence of organic nervous disease with fairly well defined types of personality. A majority of observers have come to believe that the anti-social reactions of many have their roots in the personality make-up of the individuals which prevents them from adjusting themselves to and complying with the laws and customs of their fellowmen. Psychoanalysis has thrown much light upon the influence of make-up on the symptom picture in both organic and functional mental disturbances. As a result of our studies of personality we have been able to formulate certain well defined types, such as the psychopathic, schizoid and syntoid.

Having arrived at the conclusion that the non-organic mental disorder are secondary to defects of personality; the question then arises, what is the cause of the personality defect? During the past two years the writer has been making a special effort to secure accurate and complete anamneses in all cases not developing upon an organic basis. The histories included a study of the personality make-up of the members of the immediate family, the home situations, general childhood training and personality of the patients. From a careful study of these histories it has been possible to note the manner in which the various factors in the family situation tended to mold the personality of the individuals so that they were eventually unable to comply with the demands which society made upon them; also to establish a relationship between the personality make-up of the various patients and the symptom pictures which they presented. A review of 100 cases of dementia præcox, having satisfactory histories, showed that 94 patients had a make-up that was decidedly schizoid, 5 showed relatively more schizoid tendencies than syntoid, and it was in only one instance, an advanced case of dementia præcox with deterioration, in which the personality make-up was essentially syntoid. A study of the

personality make-up of 30 cases of manic-depressive showed that they differed vastly from the personality make-up of the dementia præcox group; 22 of the 30 cases were described as being subject to emotional variations, while 8 were noted as showing no striking personality traits. This whole group was essentially of the extroverted type, and in every instance the syntoid traits outweighed the schizoid features.

The writer has been interested in the development of the psychopathic personality, and while the number admitted to State hospitals suffering from psychosis with psychopathic personality is relatively small, an opportunity has been offered to observe a considerable number of individuals suffering from a psychopathic personality in the mental hygiene clinics, and also in the examination of individuals charged with delinquency and crime. In practically every case (care being taken to exclude those showing actual mental defect) the pathological personality which the individual manifested seemed to be the direct result of faulty childhood training, which in the majority of cases began at an early age. In fully 90 per cent of these psychopathic individuals there was definite early sex trauma and subsequent early sex perversions.

In discussing the influence of early environment the question is frequently asked, why does only one in a family of three or four children develop undesirable personality traits and the remainder of the children escape? A careful study of the family situation in cases of this kind will show that the child developing the undesirable personality traits was by virtue of age, sex, intelligence, personal appearance, ill health or economic conditions subjected to much different attention and training than the other children of the same family. In many instances the attitude of one or both of the parents toward the child differed materially from that accorded to the other children. Parents as a rule are unconscious of this, but sometimes they will admit it. However, to the disinterested observer these facts are plainly evident. The Oedipus and Electra complexes when present were invariably found to be associated with faulty training of the child in the home. Some of the more common forces which were found to contribute to the formation of these complexes were the absence, disability or death of the parent of the same sex, in which event the individual child assumed to a certain extent the role of the incapacitated or absent parent. A stern

exacting attitude toward the child by the parent of the same sex, with a sympathetic attitude by the parent of the opposite sex was found to contribute to parental fixation in many instances. In two cases observed during the past year the individuals were subjected to the discipline of strict and exacting parents, the result being in both instances that the individuals left home at an early age, wandered about the country for years, indulged in many vices and sex perversions and eventually became criminals.

The following cases would seem to demonstrate the manner in which the family situation and faulty childhood training of the individuals so molded their personality that they were unable to adapt themselves to the demands of society.

V. D., male, 20 years of age, single, carpenter, personality make-up showing predominance of schizoid traits. Family history complete for three generations, negative except for father who was an uneducated man, leg amputated (when patient was five years of age), excessively alcoholic, irritable, dishonest, unkind and abusive to family. Mother kind, agreeable, hard worker, interested in family, devoted to church, many friends.

The patient was an only son, the second child of a family of seven. Early life and childhood uneventful. Began school at seven, left at 14, at which time he was in the seventh grade.

As a boy he played naturally with other children until 10 years of age, following which he remained at home when not in school in order that he might assist his mother, who did laundry work. As a result of the family situation he never had an opportunity to mingle socially with companions and lost contact with the friends whom he had made in his early childhood.

Three days before his admission to the hospital, at the age of 20, he became excited, said he was going to take a trip around the world with his mother; that he did not have to work longer as all the money in the banks belonged to him. On the day prior to his admission he walked into a bank and demanded that all the money be turned over to him, which act led to his arrest and subsequent commitment.

Physical examination at the hospital showed him to be of the asthenic type, male distribution of hair, in good physical health.

His manner was exalted. He carried his shoulders erect, was dominant toward the other patients, proclaimed himself to be the ruler of the universe, refused to do any work, whistled, sang and at times showed considerable irritability. His conversation was at times somewhat disconnected. In giving an account of his life he said that as a small boy he sold papers and earned all the money he could, giving the same to his mother who used it in the care of the family. At the age of 14 he left school, following which he

worked continuously, giving practically all his money to his mother for whom he expressed much admiration and sympathy. He manifested a dislike for his father because of his alcoholic habits, neglect and brutal treatment of the family. He admitted a feeling of inferiority which he said had persisted since he was a small boy and attributed this to the fact that he was always ashamed of his poor clothing, the conditions in the home and his father's misdeeds. He said that on several occasions his father had been arrested for assaulting his mother and that many times he had been called upon to protect the mother against the attacks of the father. He stated that he always had a desire to go out with other boys and girls but could not do so as he lacked proper clothing and money to spend.

He admitted masturbation beginning at the age of 10. The mother and sister were the subjects of his masturbation fantasy. Sexual relations with his oldest sister took place at the age of 12. Mutual masturbation and sodomy occurred with a boarder at 17. He had heterosexual relations with a prostitute at 17 and on two or three occasions after that time.

He expressed the belief that he heard God's voice saying that he was the ruler of the universe, that all the money in the banks belonged to him, therefore, his mother would not have to work any longer. At times he believed he heard his mother's voice saying that he was to be married to a nurse in the hospital and that he was a born God. He fancied that he heard the voice of a neighbor woman, who was about his mother's age and who when he was a small boy was very kind to him, making improper proposals to him and expressed the belief that this woman caused him to have strange feelings about the body, pains in his genitals, loosened his teeth and on one occasion tried to poison him.

His sensorium was clear, insight lacking. Mental diagnosis, *dementia præcox*.

A study of this case shows clearly how the inadequate childhood training of this boy promoted the development of the Oedipus complex, schizoid make-up and definite feelings of inferiority. Although this individual worked hard he was unable to enjoy the pleasures of society and to obtain the recognition which he craved. In his psychosis he emancipated himself from all these unpleasant conditions, liberated his mother from the necessity of working hard to support the family and overcame his feelings of inferiority by his ideas of wealth and power.

R. J., 16 years of age, single, high school student, a personality showing predominance of schizoid traits. Family history complete for three generations, essentially negative except for father, a banker and real estate dealer, domineering, quick tempered, possessed with poor judgment regarding business matters, strict and irritable with his family. Mother, a kind, agreeable woman, religiously inclined, deeply interested in her family.

Patient, the second of 10 children. Birth and early life uneventful. He began school at the age of five and left at 15, at which time he was in the second year high school. As a small child he was bright, alert, got on well with other boys, played baseball, football and other games in a natural manner. The father opposed patient's attending dancing school and his association with girls.

At the age of 13 the father induced him to assist with the bookkeeping in the bank of which he was president. He was selected in preference to the older brother because he was a better penman and more accurate with figures. Parents stated that at first the patient disliked this very much and complained that it gave him no time to play with the other boys after school or Saturday afternoon. That on one occasion he slipped away from the bank and went to a ball game, following which his father punished him severely. In the event that errors were made at the bank it was sometimes necessary for the patient to work until midnight to assist in balancing the books. The parents praised the boy for his efficiency and frequently drew a comparison between him and the older brother, who was assigned to more menial tasks of sweeping walks, carrying out ashes and doing janitor service about the home. The mother stated that after a few weeks the patient seemed proud of his work in the bank and appeared to feel his position. He continued to do good work in school but devoted all of his spare time to work in the bank. This continued until the patient was 16 years of age, when the bank was forced to close its doors because of unwise investments in real estate. At this time the father was arrested and in jail for several days. Immediately following the closing of the bank the patient seemed depressed, remained at home, spent much of his time day dreaming and playing the radio. He asked his parents to permit him to leave town as he did not wish to face the boys and girls in school. Arrangements were made for him to go to the home of his grandfather near Detroit, Mich., where he entered school. However, upon his arrival there he seemed to have difficulty in applying himself to his work, he became more seclusive and finally remained in bed, refusing to go to school. He was returned to his home after an absence of little more than a month. On his return he seemed very much embarrassed, talked to himself, at times refused to answer members of his family, was irritable toward his father, stared into space and frequently expressed a desire to die. On the second day following his return he struck himself in the temple with a toy revolver causing a discoloration of the skin. When questioned about this he admitted that it was an attempt at self-destruction. This act brought about his commitment.

Physical examination at the hospital showed him to be a well nourished boy of 16 years with a thyroid gland which was slightly palpable, otherwise negative.

His general attitude was one of indifference to his surroundings; untidy in his personal appearance, spent much time gazing from the windows. On the second week following his admission he developed a semi-stuporous condition in which he remained about 10 days, during which he wet and soiled, refused food and had to be fed with a tube. During this period when spoken to sharply he would at times utter two or three words which were disconnected and almost unintelligible. Following this stuporous condition he continued indifferent, apathetic, spent much time sitting quietly staring into space. Refused to do any work assigned to him. When he talked he expressed great admiration for his mother and marked dislike for his father. He said that the family would be better off if the father were dead as he had brought disgrace on all of them.

When asked to give an account of his trouble he said that as a small boy he was fond of playing with others of his own age, but at the age of 13 his father compelled him to spend all of his time when not in school in the bank; that this gave him no time to play; that the girls and boys, whom he had formerly known, became jealous of him and he lost all of his friends; that because of his red hair and the fact that he worked in the bank the boys in school nick-named him "Red the Banker"; that after a few months he became interested in the work in the bank and the desire to associate with the other boys and girls gradually faded away. In this connection he said, "The bank meant everything to me. However, after the failure and my father's arrest, the other boys shunned me. I felt disgraced and my whole life seemed changed."

He suffered from auditory hallucinations in that at times he fancied he heard God's voice saying to do right and his mother's voice saying that he should be a good boy. He expressed a feeling of inferiority as he said he felt disgraced by the failure of the bank and the subsequent arrest of his father. He blamed the father for all of the trouble as he felt that it was due to his unwise management that he had incurred the displeasure of a wealthy man in the community who had brought ruin to their bank. During the first three months of his residence in the hospital he showed some improvement. He spent much of his time in reading books which dealt with electricity and stated that he wished to master the subject of electricity as to him electricity meant power over all things. This, no doubt, was an endeavor on his part to overcome his feelings of inferiority. When not in a stuporous condition his sensorium was clear. At times he appeared to have some insight into his condition in that he occasionally remarked that he was unable to concentrate his mind and to apply himself as he had formerly been accustomed to do. Diagnosis, dementia præcox, catatonic type.

A study of the training of this boy shows that he was subjected to the will of an irritable, stubborn and psychopathic father, who at a tender age com-

gelled the patient to separate himself from his associations with children of his own age and devote all of the time when not in school to work in a bank. At first this was apparently a hardship, but when the patient found himself in a more or less enviable position and received the praise of his parents, he willingly relinquished his natural inclinations and devoted all of his energies and spare time to the work in the bank, which he felt would gain him recognition. When he was suddenly removed from his rather exalted position and confronted with family disgrace he found himself without many friends and with nothing which he could substitute for the main interest in life which had suddenly been removed, unable to face the situation he became seclusive, expressed a desire to leave home and later a desire to die. At last he took flight into a psychosis in which he was either in a stuporous or dazed condition much of the time. While in this condition he stated that he had no worries as he did not think. In his psychosis he found relief from the conflicts which were the outcome of his misdirected life.

R. B., male, 18 years of age, son of office manager. Readmitted to the Utica State Hospital, November 27, 1926.

Family history is complete for three generations. Paternal grandmother died at 56 of cancer. One paternal aunt committed suicide at 20 following an altercation with her husband. Father, aggressive, industrious man, kind to family, devoted to his business. Mother, kind, agreeable woman, rather unstable and easy-going.

Patient was the second of a family of four boys. Birth and early childhood uneventful except for the fact that he was breast fed until the age of 14 months at which time he was weened. He protested during the weening period to such an extent that his mother was obliged to have him sleep with his father in a separate room. He had the usual diseases of childhood and recovered without complications.

Entered kindergarten at five, left school at 14, at which time he was in the second half of the eighth grade.

As a small boy he was stubborn, fond of remaining at home, showed a marked preference for the mother. He would wash and dry the dishes for his mother and was ever anxious to assist her in the care of the younger brothers. At times he would tell his mother to go out and have a good time, that he would care for the children. In speaking of this the mother stated that he was like a mother to the other boys; that his conduct in this respect was so marked that neighbors frequently called attention to it. She also stated, "I have often said that Robert should have been a girl." He never paid attention to girls, played very little with boys, never cared for dances or parties. He was bashful, shy, frequently passed acquaintances on the street who spoke to him, called him by name, but he made no response. The parents stated that he would spend hours reading at home; that unlike other boys he preferred to remain at home rather than to go out and play.

When the patient was 12 years of age he fell from a tree, a distance of several feet, striking on the right side of his head. He was unconscious for about 12 hours, following which he remained home about two weeks, when he seemed to have completely recovered. He resumed his school work and appeared to be in his usual mental condition until the summer of 1922 at which time he was 14 years of age. At this time the mother noticed that the patient appeared disinterested and that he spent much time day dreaming. When he entered school the following September he showed no interest in the work, took off his shoes and stockings in the class room, was restless, made faces at the other pupils and conducted himself in such a manner that it was necessary for him to discontinue his attendance in school. During the winter, 1922 and 1923, his mental condition gradually became worse and in March, 1923, he told his mother that he saw several dogs on the lawn when none were present. Although several X-ray examinations were made of the patient's head no evidence of fracture was discovered. In April, 1923, the family decided to have a subtemporal decompression performed. This was done and the patient remained in the hospital about two weeks when he returned home, and while he appeared to be in good physical health, his mental condition showed no improvement. He later followed his mother about the house, seemed to be afraid to be away from her. On several occasions during the summer of 1923 he accused his mother of putting poison in his food and at such times he had to be urged to eat. He complained of smelling peculiar odors about the house. Seemed afraid to go to bed. Insisted upon sleeping with the mother. This continued for several weeks when his feeling of fear subsided and apathy and indifference returned.

About the middle of June, 1926, the mother smelled smoke and on going to the attic found that he had built a fire in the middle of the attic floor. When the mother remonstrated with him for doing this he laughed and said his reason for doing it was because he had nothing else to do. Because of his peculiar behavior he was committed.

Physical examination at the hospital was essentially negative except for scar on right side of head, the result of decompression operation in April, 1923. No definite neurological signs.

The patient's manner is one of apathy and indifference. At times he laughs in a silly manner without apparent reason. He is careless in his personal appearance and at all times he seems preoccupied. During his stay in the hospital he has shown little spontaneity. His conversation is slow, disconnected and irrelevant. He appears much out of touch with his environment, and is unable to explain his conduct. Diagnosis, dementia præcox, hebephrenic type.

A study of this patient's childhood training shows that in the nursery period it was decidedly faulty as this boy was allowed to continue for 14

months in the arm and breast relationship, which was the nearest to intra-uterine life he could enjoy after birth. During this period of mutuality of interests with the mother there was the most intimate intermingling of the ego-libido patterns. As the result of this faulty early training this boy developed a definite mother fixation and as he grew older attempted to identify himself with the mother in the care of the brothers. He was always bashful and shy, never cared for the society of boys and girls of his own age but preferred to remain home and assist his mother in the performance of her household duties. At the age of 14, when society began to make additional demands on him, he was unable to cope with the situation and gradually developed a psychosis in which he evidently regressed to an infantile level, was content to remain at home and live a life of fantasy amid the surroundings of his early childhood.

N. C., female, 23 years of age, single, college student, syntoid type of personality. Family history complete for three generations essentially negative except for the father, who was intemperate, yet a good business man, quick tempered, honest, many friends, respected in the community. Mother was said to be a quiet, agreeable woman, religiously inclined, many friends. She died when the patient was two years of age, following which the patient was adopted by a family having no children. Foster father kind, agreeable, religiously inclined, fond of society, many friends. Foster mother, well educated, high ideals, agreeable, fond of society. Foster parents were ever mindful of the fact that she was an adopted child and were ever anxious to do what was best for her. As a result they devoted much attention to her social and intellectual training. However, she was allowed much liberty in the home and her emotional manifestations were seldom restrained. She had many friends, was encouraged to attend dances and parties and was popular among young people of her town.

Following graduation from high school she took a post-graduate course, later attending business college. At the age of 20 she entered college, did excellent work for the first three years. Beginning the fourth year she secured employment evenings and Saturdays in an insurance office. At Christmas time following this the family observed that the patient seemed worried, restless and depressed. She told her family she could never go back to work; that she had lost all confidence in herself. However, at the expiration of her vacation she returned to college, but her nervous manifestations increased. She was unable to take her mid-year examinations. She entered a sanitarium where she remained two months, returned to her home in April, 1924. She was talkative, excitable, over active, flippant and flirtatious. She remained at home until July, 1924, when she told her relatives that she was going to Syracuse to take an examination in connection with her college work. She left, went to Syracuse, secured employment in the insurance office where she had previously worked.

At the office she was talkative, excitable and dominating. At the end of four or five days she had a quarrel with the manager who ordered her to leave the office, following which he notified her family that in his opinion she was mentally ill. She was returned to her home where she continued restless, excitable, irritable, unable to sleep at night, talked of money, marriage and many business schemes. This continued for about 10 days at the expiration of which time she was committed to a hospital.

Physical examination showed that she was undernourished, otherwise in good health.

Mentally she was over-active, excited, talked incessantly, showed flight of ideas and distractibility. She talked much of love and marriage. Dressed herself in many colors, was playful and flirtatious. Her mental content was never obscene and her affect was natural.

In giving an account of her life she said she always had gotten along well until the beginning of her fourth year at college, at which time she secured a position in an office. Soon after this the manager, who was a married man with a family, began to devote considerable attention to her. He related to her the instances of his unhappy married life and solicited her sympathy. This man also appeared to be solicitous of her welfare and assisted the patient with her work in the office whenever possible. After a time he kissed her and on several occasions invited her to go out with him after office hours. She said that although she liked the man she always refused as it was contrary to her principles. In this connection the patient said, "This situation worried me and interfered with my college work so that I was unable to continue. At times I blamed myself for having allowed him to pay me so much attention. This affair annoyed me so that I was unable to concentrate my mind upon my work." However, she admitted that it was her attraction to the man which caused her to return to Syracuse and seek employment at the insurance office immediately preceding her commitment; that soon after her return the manager renewed his attention to her; that this seemed to increase her nervous symptoms and resulted in her illness. When asked to explain her domineering manner in the office she said, "I had to keep on my dignity in order to keep the manager in his place."

The mechanisms of this patient's trouble were carefully explained to her, following which she gradually improved and after a residence of about six months she was paroled from the hospital. At the time of her parole she was warned to discontinue her interest in the man who caused her trouble. She returned home with her sister, resumed her college work, graduating in June, 1925, at which time she received an honorary degree. Diagnosis, manic-depressive psychosis, manic type.

In this case the patient's excellent childhood training resulted in well

developed extroverted tendencies, high ideals and good moral character. At a time when she became closely associated with a married man, who at first sought her sympathy and later made advances to her, although much infatuated with him, her early training prevented her from moral lapses. However, conflict arose between her personality and her sexual cravings and as a result she developed a psychosis which was benign in character and during which she handled the whole affair on an adult level. After the mechanisms of her trouble were explained to her she improved rapidly and made an excellent recovery. Had this patient been a victim of an inadequate childhood training, the results of this episode would have been much more serious.

How can we prevent social inadequacy and thereby diminish the number which each year society feels called upon to segregate and to place in hospitals or penal institutions? In the opinion of the writer this could be accomplished by the better training of the child in the home and the protection of the young from those who are already conditioned along anti-social lines. In order to bring this about it will be necessary to inform the public of the importance of adequate childhood training and the dangers to which the youth of today are exposed. This in part could be brought about by appropriate press articles and by lectures on childhood training and mental hygiene at meetings of physicians, teachers, public health officers and various clubs. Every medical college should include in its curriculum a course in mental hygiene in which stress should be placed on the influence which the family situation and childhood training have upon the molding of personality and the subsequent mental health. Theological seminaries, colleges of law and all colleges and schools for the education of teachers should include in their curricula a course consisting of psychology, elementary psychiatry and mental hygiene. If this plan were followed it would be but a few years before the clergy, judges, members of the bar and instructors in various institutions of learning would realize the importance to society of adequate childhood training. Today the public is alert to the dangers of tuberculosis but we find few who concern themselves about the possibility of the development of antisocial conduct in the members of their family.

BOOK REVIEWS

The Unstable Child. By FLORENCE MATEER, A. M., Ph. D. Psychoclinician in the Ohio Bureau of Juvenile Research. Pp. 459. D. Appleton & Co., New York.

The author calls her work an interpretation of psychopathy as a source of unbalanced behavior in abnormal and troublesome children. The book is divided into two sections, (1) The unstable child in theory; (2) The practice of psychopathy.

The first chapter is devoted to a review of the methods used prior to the Binet tests at which time the "experts" were the men in charge of institutions for feeble-minded who had the "greatest amount of clinical experience" and the "greatest diagnostic ability." Their observations were graded as somewhat feeble-minded, high-grade feeble-minded, high-grade imbecile, etc. With the general adoption of the Binet tests this was changed so that we have now a more uniform standard, provided the tests are given by a person who has had training in the technique of psychometric testing. The apparent simplicity of measuring intelligence proved the greatest drawback to the actual growth of the professional application of the method.

The present tendency is to save time by testing groups. Though this does have the desired results in the matter of saving time, its results show nothing except the ones in need of more accurate testing. Others try to make the psychometric test elicit the cause of a delinquency and though it may show a defective mental endowment in the delinquent, it does not detect those whose abnormal behavior is not due to lack of intelligence but rather a failure to make use of their ability due to depressions, distorted ideas, brainstorms, etc. Delinquency is an individual problem and must be treated as such. The study of the delinquent must be scientific, it must be thorough, it must be preventive, corrective, educative and economical.

The problems of today include the need for getting away from the mental age rating as the end to be sought in an examination; correction of the idea that immorality and feeble-mindedness are synonymous terms; case characterized by flight whether as truants, nomads, hysterics, etc.; temper cases; pathological liars; so-called kleptomaniacs; and habitual offenders. These are the cases which offer a problem to the psychologist today rather than feeble-minded or insane children who are more or less incidental and can be recognized in many cases by the untrained observer.

An outline of equipment needed for a laboratory of clinical psychology is next given, the basis for this outline being the laboratory in which the author does her work located at Columbus, Ohio. Part of the "equipment"

needed is the psychologist who requires training, a certificate to guard against fakirs and charlatans, and the best possible education—he cannot have too much. The author emphasizes the importance of the personality of the psychologist due to the possibility of excitability on the part of the examiner serving to overstimulate, irritate, and fatigue the patient. Various other types of ineligible examiners are then described ending with an outline of the qualifications of the author's ideal.

A chapter is devoted to means and methods criticising present methods and suggesting better. The suggested improvements are admittedly not feasible for general use outside the laboratory.

Next comes a chapter on verification of results and one on results so far obtained. She compares the child with a car. The psychometric test is used as a measure to decide which class the child falls in and shows that though there is probably less chance of a Marmon getting out of order than a Ford, it does occur. Similarly the child with a very complex make may “go wrong” in the same way as one poorly endowed.

Why do we have delinquents? Is delinquency increasing? At least it is not decreasing. The author believes delinquency to be due to the inability of the child to adapt himself to the multitudinous demands made upon him by a complex civilization.

Five chapters are given to the review of 369 children studied in bureau cottages during two years and extends from those with mental age of less than one year to those who graded normally in the psychometric tests, but were decidedly abnormal in their reactions.

The chapter on congenital syphilis is probably the finest and most interesting in the book. The author states that in certain cases the feeling would creep in that she was dealing with a case of this kind and found that in her tests after carefully checking up her findings and comparing with records of others, using as checks only those definitely infected or definitely free from any taint, cases were diagnosed as congenital syphilis in which it required several blood tests to corroborate her findings. These findings were that syphilitics have a superficial conversational ability which enables them to make a much better impression through showing little actual difference in a psychometric test. Their stories are more vague, more fanciful. They show definite lapses of memory with regard to episodes of bad behavior. They do troublesome things, remember part of them, and then feel that their punishment is out of proportion. They yield more of drama, excitement, and require more discipline and correction. They are the talebearers, the sneak-fighters, and the temper-tantrum cases. She believes that there is no doubt that one with a knowledge of congenital syphilitics as a mental problem can recognize such cases through their behavior on standardized tests in the time usually given to such cases in a psychological laboratory of good standing.

The conclusions are: 1. That no study of one or two factors will solve the problem. 2. Age is no precludent of delinquency. 3. Sex is a factor, due to the attitude of the courts. 4. Race has no bearing. 5. Mental age bears no definite relation to delinquency.

The psychopath is a chance waste product of our attempts at civilization. He will not grow less numerous. He is with us to stay. It is our duty and our privilege to study and to help him. He feels intensely, lives exceedingly. He is a bundle of contradicting desires, abilities, and defects. He has potentialities. What he needs is early detection, long years of training, supervised parole without stigma, and a chance to make good. He will repay such care as no feeble-minded individual can. He is like the desert sands, and like them needs an understanding and all powerful master to be made fertile and productive; left undirected only evil and waste result. No individual can supply that mastery. We need institutions, hospital schools for psychopaths, hospital schools where the young delinquent will be treated, educated, trained, made independent and self-directing, and then sent out to redeem his delinquency.

The book makes very interesting reading though the subject is dealt with from a psychological rather than a medical or psychiatric viewpoint. It cannot be read hurriedly, but is well worth the time required. The index is sufficiently adequate that one can readily find the particular phase of the question he may desire.

KENNETH KEILL.

The Adolescent Girl. A Study from the Psychoanalytic Viewpoint. By PHYLLIS BLANCHARD, Ph. D. With a Preface by Dr. G. Stanley Hall. Published by Dodd, Mead & Company. 250 pages.

The preface stresses the usefulness of a knowledge of unconscious mechanisms in helping solve problems of the "soul," especially the feminine soul, "hitherto the most unknown of all the great domains of psychology." Dr. Hall urges women "to frankly recognize sex differences in body and mind," claiming that self-knowledge is more difficultly and more rarely achieved by women than by men.

Dr. Blanchard has approached the problem of the maturing girl with sympathy and understanding, and if at times her style borders on the sentimentality of a Gene Stratton-Porter, there nevertheless is much good material to be found among her pages. She obligingly traces the progress of thought through the contributions of various philosophers up to the genetic viewpoint and gives chief credit for the achievement to Fichte who postulated life as a vital, dynamic struggle toward higher planes. Fichte's limitations lay in his belief in the omnipotence of the will; these fetters were somewhat

overcome by Schelling who gave a larger scope to the will—all nature as well as human life. Schopenhauer elaborated farther, making distinction between an unconscious force in nature and a highly conscious one in the living organism—the will to live. Von Hartmann stresses unconscious factors of life; Bergson the validity of intuitional conclusions as opposed to purely intellectual deductions. Freud, of course, is the exponent of the final stage in the development of the genetic concept—the glorification, if one may so speak, of the subconscious and the libido. Jung's defection and harking back to Bergson's conception of a life energy, with his racial or feeling extrovert and his egoistic or thinking introvert, and Adler's will-to-power concept, are entered into fully and their formulas marshaled to bear upon the problem of the adolescent girl.

Womanhood here comes in for considerable praise on the score of self-sacrifice, altruism, living embodiment of racial libido, as opposed to man's expression of will to power. Woman has larger unconscious life than man, arrives at decisions more rapidly, by grace of greater intuitive powers; she makes the greater sacrifice in procreation and the advancement of the race. The author's personal bias leads her to handle gently the problem of increasing neurotic disorders as the result of economic and social curbing of the natural outlets for these estimable qualities. She sees in woman's entrance into economic competition and achievement of political equality a broad opportunity for self-development, and seeks to guide the adolescent safely along the path of the unconscious toward these goals.

A searching analysis of the physical and psychic phenomena of puberty brings out two important facts—namely, the drastic upheaval in bodily economy attributable mainly to the endocrines, and the tremendous influx into consciousness, partial or complete, of racial urges and aims. Giggling, day-dreaming, coy behavior, hero-worship, love for a man much older than herself—all are expressions of something not consciously recognized by the unawakened girl, but soon to merge into the frankly sexual. It may come as a surprise to some, to learn that dream-studies as well as frank exposition of waking mental content show that the adolescent has a vivid and colorful erotic life, perhaps all the more dangerous in its potentialities because of the restrictions enforced by unenlightened elders. Conflicts are inevitable; their results are the "masculine protest"; the author considers the refusal to be reconciled to the feminine rôle almost universal. Out of the consciousness of organic inferiority has arisen the drive for equality with men, a pathological phenomenon in its extreme phase because it flouts the love, self-sacrifice and tenderness properly belonging to ideal womanhood. The author weeps over the adolescent's frequent failure to yield to her deepest emotional nature; she sees in that yielding, instead of stubborn insistence on following the man-made path, the only possible solution of the adolescent conflict.

Various methods of sublimation of the libido are reviewed; nature-worship of the primitives, folksong and verse, the dance and art. In intelligent pursuit of knowledge, through a new and improved curriculum in the schools, much can be done to broaden the cosmic viewpoint. In addition the adolescent girl needs her own particular modification of racial play-habits, well exemplified in the girls' camp. In such ways an inner feeling of strength is developed, ultimately to banish the protested inferiority.

Pathological trends are handled by the author with keen understanding of the underlying defective training in sex matters, conditioning reactions of parents, gross lack of proper supervision and safeguarding against trauma. Recognition is given the much-talked-of homosexual component. The germs of practically all the functional psychoses are present at one time or another during adolescence; in fact, miniature psychoses may appear and whether they go on to fully-developed mental breakdowns depends much on environmental stress and the intelligence with which the subjects are handled. The author makes a plea for impersonal teaching of biological facts as part of the school curriculum.

A chapter on love analyzes the physical and psychic components of sexual attraction and concludes with a formulation of the ideal love as one that renews and replenishes itself in its mate, widening social and racial expressions.

At the door of the recent war is laid the deplorable return to primitive levels of the love life, the American girl became an unabashed hero-worshiper, overthrew conventions, allowed herself to be rushed into illy-considered marriage, with the result that later problems of adjustment were intensified. The author is in doubt as to the futures of the offspring of these unions. However, if out of the hardship, distress and unrest, the young girl can be led "to subordinate her egoistic sentiments to the racial and altruistic emotions which are the truly feminine psychic traits," sublimating and projecting her energies, bringing man to accept the new ideal of love and of Christianity, she may achieve salvation and mental peace.

MARY F. BREW.

Felix Plaut. *Studies on General Paralysis in Negroes and Indians.* BERLIN JULIUS SPRINGER, 1926. Monograph of 98 Pages.

The author, accompanied by Professor Kräpelin came to the United States for a period of three months in order to investigate the question of general paralysis among the negroes and Indians. He gives some interesting general information about the condition of life among the negroes and statistical data about the black population. In 1920 the number of negroes in the

United States was 10,463,000, almost 10 per cent of the entire population. The author gives some data concerning the death rate among the negroes, emphasizing that tuberculosis is a very common disease among the colored people. The death rate from this disease is nearly three times as great among negroes as among whites. On the other hand negroes have a partial immunity against diseases such as yellow fever and malaria.

The Occurrence of Syphilis in Negroes. The percentage of syphilis was very low among the negroes during their period of slavery, the social condition of isolation being a kind of protection for them. With the removal of this protection, syphilis spread among them and in 1874 the percentage of syphilis increased as shown by military statistics. Recently a survey of Wedder pointed out that in the army a total of 16 per cent of white soldiers showed a surely positive or slightly doubtful Wassermann while among the negroes the total percentage was 36. Other statistics collected concerning pregnant women showed that among the white women a positive Wassermann reaction occurred in 17 per cent of the cases as compared with 31 per cent among the colored women. In different clinics the percentage of positive Wassermanns was found to be 13 per cent for the white patients and 43 per cent for the colored people. As far as the peculiarities of syphilis are concerned, in primary infection the chancre appears to be more indurated in negroes than in white. Extragenital infection is more rare in negroes than in whites. In the secondary period of syphilis the papillo-follicular exanthema is much more frequent in negroes. The tertiary manifestations are slightly higher in negroes, 17 per cent, compared with 14 per cent in white people. Aortitis is twice as high in colored people. Qualitative differences are however not seen in the syphilis of negroes compared with that of the whites. The treatment that the negroes undergo is usually very superficial, as they frequently stop it with the disappearance of the external manifestations.

The author then makes a survey of the mental affections among the negroes and points out that the rate per 100,000 of mentally diseased patients in institutions in the United States is 192 for negroes and 258 for whites. This does not mean however that white people have a higher percentage of mental cases but is due to the fact that in the states of the South where the majority of negroes live, the care of the insane is not so well developed and not all the patients are committed to institutions. As far as the mental forms are concerned, the percentage of dementia præcox is slightly lower in negroes than it is in whites while that of manic-depressive insanity is slightly higher. Alcoholic psychoses in the State of New York are higher in negroes than in whites. As for general paralysis, Barnes quotes that before 1860 the negroes were almost immune to general paralysis. With the mixture of blood and with the change in social life the disease spread and in 1922 the percentage of

paretics among the admitted cases in the state asylums was 11.6 for the negroes compared with 8.5 for the whites, and among the resident patients 4.4 per cent for the negroes against 3.6 per cent for the whites. At St. Elizabeth's Hospital, the percentage of general paralysis in colored women is 6.6 against 1.8 for the white. As far as type of paresis is concerned, nothing special has been noticed in the negroes, the only peculiarity being that the percentage of hallucinations in negro paresis is almost double that in the whites. The simple dementing type seems to prevail among negroes. Cerebrospinal syphilis is three times as frequent in negroes as in whites. Conversely the cases of tabes are less frequent in negroes.

The author then studies the occurrence of syphilis among negroes in Cuba. The colored population of Cuba was in 1924, 830,000. The frequency of general paralysis among the negroes of Cuba was reported in 1862 to be less than among the whites. In 1925, among 534 negroes present in the Asylum of Mazorra, only two paresis were found and in over 602 negresses no paresis at all; while in 760 white patients there were 20 cases of general paralysis. The rarity of general paralysis in the Cuban negroes is in contrast with the frequency of general paralysis in the North American negroes although syphilis is prevalent in Cuba. This contrast could not be caused by the difference in the frequency of syphilis. There must be some protective influences that have escaped all investigations. A comparison with other groups of negroes living under the same conditions but showing a higher general paralysis morbidity would perhaps help to find the unknown factor.

Syphilis Among the Indians. The North American Indians in the main live in small reservations; they number almost 350,000 people. Mortality is very high among Indian children and meningitis, scarlatina and diphtheria are very severe infections for them. Malaria and small-pox are frequent among them. A paper of Hummer's quotes that in 1911 there were in the entire United States 150 Indian, an average of one out of every 2,000 Indians which is a very low percentage. Hummer believes however that many mental patients, especially epileptics are free on the reservations and not committed to the asylums. As far as syphilis is concerned, many physicians of the reservations report that among the very poor Indians, it is a rather rare disease. As to type of syphilis in Indians and whites, no differences have been generally noticed. Reports of serological findings show that 13.5 per cent of the Indian men and 7.7 per cent of Indian women have positive Wassermann reactions. In the Asylum at Canton, South Dakota, there were at the time of the survey of Plaut and Kræpelin, 100 patients, derived from 27 different tribes. Among these 36 were cases of dementia præcox, 25 idiots and 18 epileptics. A Wassermann test of the blood of these patients gave positive results for 10.9 per cent of the men and 7.3 per cent of the women. At the time the superintendent of the hos-

pital told Dr. Plaut that he knew of only one case of general paralysis in the history of the institution. This case had been committed in 1908. However, an inquiry made by the author as to the number of paretic Indians in the country revealed the fact that three undoubted paretic cases were now living. Among dead Indian patients the inquiry showed that six had been considered paretics. Although the number is exceedingly small it proves that American Indians have not complete immunity against general paralysis as was for a long time supposed. The rarity of paresis among the Indians does not correspond with the frequency of syphilis. The author is in doubt how to explain this discrepancy and thinks that perhaps the occurrence of other infectious diseases may influence the course of syphilis. In some of the states, the large number of cases of malaria and small-pox may play a certain rôle. Investigations along this line would be desirable.

The Indians in Mexico. Indians of pure or mixed blood constitute two-thirds of the population of Mexico (10,000,000 out of 15,000,000 inhabitants). According to Dr. Vasconcellos syphilis among Indians in Mexico does not vary from syphilis among the white population. In a paper published in 1911, Moreno in a survey of 100 cases of general paralysis found that 15 were Indians, 57 metis and 28 white Mexicans. At the time of their survey Plaut and Kræpelin found 1,274 inmates in the city asylum of Mexico City. Of these, 20 per cent were Indian and 75 per cent metis. Plaut tested the blood of 100 general patients in the asylum and found 24 with a positive blood Wassermann. The percentage of positive cases in women was double that in men. Among the patients there were 77 cases of neurosyphilis, 53 men and 24 women. Among the men, 16 were pure Indians, 10 of whom had general paralysis. No special feature of the general paralysis was noticed except that the expansive form appears to be more frequent in Indians in Mexico than among patients in Europe. Among the women only three cases of paresis were found although the percentage of syphilis is higher in women than in men. In Mexico too, then, the percentage of paresis is not proportionate to the percentage of syphilis.

The hypothesis of small-pox protection against paresis is briefly discussed by Plaut but could not be confirmed by his investigations as the author was able to find paretics with typical scars of small-pox.

Psychiatric Institute, New York.

A. FERRARO.

Infant Mortality and Its Causes. By ROBERT MORSE WOODBURY, Ph. D.
204 Pages. The Williams and Wilkins Company, Baltimore.

The decline in infant mortality rates in recent years constitute one of the greatest triumphs of preventive medicine. The fact that such decline has taken place in the United States is generally known, but knowledge of the extent and causes of infant mortality and of reduction of rates among the

various classes of population in the several states is still limited. In this attractive volume Dr. Woodbury makes a notable contribution, not only to available information concerning past results, but also to methods and principles to be used in future preventive effort.

After giving a statistical survey of infant mortality in the United States covering six years, he discusses problems in the study of the subject, including methods of obtaining the data, of preparing them for analysis, and of analyzing them so that sound conclusions may be reached. He then describes a survey of factors affecting the lives of babies born during the years 1911-1915 in eight representative cities, each located in a different state. The survey was conducted by the Federal Children's Bureau of which the author was statistician. Satisfactory data relative to 22,967 infants were obtained. These data furnish a good basis for the comprehensive analysis made by the author in succeeding chapters. Among important topics discussed are breast and artificial feeding, race and nationality, economic factors and housing conditions.

Supplementing the analysis of survey material, an illuminating chapter is given on infant mortality and preventive work in New Zealand. This remote country has the proud distinction of being the healthiest country in the world. Its infant mortality rate for its white population in 1924 was 40.2, which was lower than that of any other country. Various factors contributing to this low rate are discussed, including laws regulating midwives and nurses and establishing state maternity hospitals, the protection of children boarded out apart from their mothers afforded by the Infant Life Protection Act, and the infant welfare work of the Royal New Zealand Society for the Health of Women and Children.

The appendix contains an interesting analysis of the trend of maternal mortality rates in the United States Registration Area from 1900 to 1921. On the face of the returns it appears that the rates have been increasing, but after a careful study of the data the author concludes that there is "a strong presumption that the mortality from puerperal septicemia actually decreased throughout the period 1900 to 1920, while that from other puerperal causes remained approximately the same."

POLLOCK.

Heredity. By J. ARTHUR THOMSON, M. D., LL. D. Regius Professor of Natural History in the University of Aberdeen. Pages 530. Illustrated. Fifth Edition, Revised. R. V. Coleman, New York, 1926.

In the fifth edition of this standard work the author has thoroughly revised the text and incorporated some of the new discoveries in this department. The work is in the nature of a review of the works of others in this field and while Professor Thomson at no time leaves the reader in doubt as to his own

position he tries, in the main with success, to set forth in some detail the ideas of those with whom he differs, as well as those with whom he agrees.

Professor Thomson is very evidently a conservative which perhaps is a superfluous statement in view of his connection with a Scottish University. Within the limitations of a single volume he has covered this large field very well indeed. The work is well designed to give the reader a summary of the latest and best thought on many of the intricate problems under discussion, and it, therefore, is of special value to the student and is entirely possible for the lay reader intelligently curious regarding the subject.

The illustrations and charts, some of them colored, add to the value of the work. Obviously, with so broad a subject, the author could not give too much space to any one phase of the subject. By far the longest chapter is that on the transmission of acquired characters and this perhaps is to be expected in view of the very great interest therein, and the wide disagreements among scientists and experts in biological work. We can at least agree with his statement that we must have certain standard definitions which all may accept as to what is meant by "acquired character," "modification," "variation," etc., as some of the apparent disagreements may be due to this cause.

Professor Thomson is one of those who concludes there is little or no scientific warrant for being other than extremely skeptical as to the inheritance of acquired characters or better perhaps, the transmission of modifications. It is entirely orthodox for a person to adhere to the negative or the affirmative on this subject and the reader may in this chapter find adequate basis for either position.

In the chapter on heredity and disease the author makes some observations of interest to psychiatrists. One of the suggestions is that some of the cerebral variations which are called "nervous disease" may be in an evolutionary sense, attempts at progress. Another suggestion is that the social heritage man has created around himself and which often evolves quickly, hurrying, harrying and pressing its creator, who cannot always keep pace with it, is a frequent condition of mental disorder. To the reviewer it seems doubtful if this suggestion has any more real merit than the commonly accepted belief which has existed from time immemorial that the present younger generation is degenerate and in nowise to be compared favorably to the generation which preceded it.

Professor Thomson offers the suggestion that nervous diseases seem in part due to the fact that the germ plasm is not varying quickly enough to keep pace with the changes in environment—physical, biological, psychical and social, and that the process of adjustment results in a strain that may provoke mental disease.

The author's discussion of the subject of nervous and mental diseases,

perhaps because of its necessary brevity, contains nothing new or of particular value to the psychiatrist. He is reluctant to admit that heredity plays any large part in mental diseases generally and in this he probably is in accord with the best modern thought in the specialty.

As suggested above Professor Thomson's work is primarily a review and therefore of value to the uninitiated and to the layman. It is, perhaps unfortunately, rather a difficult book to read and in common with so many other works printed abroad, the index leaves much to be desired, thus considerably detracting from its value as a reference work.

FARRINGTON.

A Text-Book of Anatomy and Physiology. By JESSE F. WILLIAMS, M. D., Professor of Physical Education, Teachers College, Columbia University, New York City. Second Edition, Revised. 12 mo of 531 Pages with 375 Illustrations, 26 of Them in Colors. Philadelphia and London. W. B. Saunders Company, Philadelphia, 1926.

This book is dedicated to students in the field of the practical arts: Household arts, nursing, occupational therapy, physical education and physiotherapy.

The merit of the text-book resides in the arrangement of the material and the emphasis given here and there to the more practical matters, though details are sufficiently gone into to satisfy any student outside of the medical school.

The text-book begins with biology and ends with Chapter 19 regarding organs of general and special senses. The 18th chapter dwells in quite a clear and interesting way upon the endocrine system.

The intermediate chapters take up all general subjects of anatomy and physiology, including the nervous system. New facts and new words are introduced with thorough explanations as to their meaning. Many things are elaborated by means of charts and diagrams.

At the head of each chapter is an outline of the subjects therein treated, and at the close of each are practical questions, exercises and suggestions. Teaching difficulties are thereby lightened in the application of theory. The book is excellent for teaching and reference purposes.

SOMERS.

The International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Articles Covering Various Branches of Medicine and Surgery. The Contributors Are Well Known International Specialists in Their Various Lines. J. P. Lippincott Co., 1926.

The first part of the volume takes up diagnosis and treatment beginning with gastric function following operations on the stomach. The peptic ulcer

is still considered a secondary disease. Pathologists are still searching for the primary cause or causes. The clinical diagnosis of peptic ulcer with modern aids is subject to considerable uncertainty. Experimental work upon animals has contributed but little to the subject. Studies regarding the physiological action of the stomach after operative interference is the bulk of this paper. Excision of the ulcer only, brings about no essential physiological changes. Pyloroplasty and gastro-enterostomy caused no very great alteration in the acid curves. Sub-total gastrectomy where the antrum and pylorus were resected showed no marked lowering of the acidity.

The next paper considers the functions of the liver and their appraisal. The article is not based upon tests of liver functions, but rather deals with the various functions of the liver with respect to protein and carbohydrate metabolism formation and excretion of bile and the excretion of foreign dye stuffs.

Article three treats in an interesting way the disease factor in history. Malaria was an important factor in the downfall of ancient Rome and Greece, affecting first the military, then the industrial, artistic and literary fields. The history of malaria is further traced in other European countries and the United States, and the crowning work done at the time of the digging of the Panama Canal is emphasized. The history of the Black Death, or Bubonic Plague is traced back to 1347, the year of the Battle of Crecy. It was imported by ships from Genoa and thence through the Rhone Valley. The physician to one of the Popes at Avignon gave an accurate description of this disease. It entered England by the way of Weymouth and the death rate was so great that English became the language, rather than French. It was in the time of Chaucer. The history of small-pox is traced and many other matters are touched upon, showing the tremendous effect of disease upon nations and peoples ignorant of the ways and means of public hygiene.

The fourth article is a summary of the present knowledge of vitamins and their therapeutic importance.

The fifth article treats of blastomycosis of the cornea.

Article six is entitled "A Very High Blood Pressure Clinic," freely illustrated with plates. It describes a group of seven people under observation for 10 years or more, and is a study of the remarkable compensatory nature of blood pressure. The main point in the article is that even high blood pressure is a compensatory phenomenon, and that it is not important enough to interfere with, except to judiciously influence the underlying condition. The treatment is summed up in "exercise, diet and castor oil."

There is an interesting chapter regarding convulsions simulating epileptoid or epileptiform seizures, covering the subject from infancy to old age, and embracing functional and organic types.

Acidosis and alkalosis in infancy, including treatment, embraces another article.

Treatment of cancer and other subacute and chronic infections by radio-ionic medication of uranium is the next article.

The management and treatment of bronchial asthma is recorded.

A comprehensive section is devoted to nervous, delicate and backward children.

Under the subdivision of neurology, psychiatry and psychology are studies, with plates, on brain anatomy at the University of Zurich. Remarks cover secondary degenerations, experimental athetosis, as well as the question of aphasia and diseases of the extrapyramidal system are discussed, particularly in the light of new data following epidemics of encephalitis. Photographs are given of various facial involvements, postural defects and types of tremors.

Professor Hess of the University at Zurich sets forth comprehensive data regarding the unconscious and the instincts.

Professor Bümke of Munich has a short article regarding psychoanalysis. This is a criticism of certain sweeping conclusions which he considers unwarranted, and he suggests psychoanalysis has a limited use in the management of nervous diseases.

Under surgery the treatment of empyema and stab wounds of the chest are considered.

An unusual case of dermoid cyst is set forth in case record style.

Under the subject of travel are notes regarding European medicine and medical education particularly pertaining to Italy. The present renaissance of Italian medicine is written by Professor Cattell.

A biography of the late Sir Clifford Allbutt is the closing article of this volume.

SOMERS.

- (1) **The Fundamentals of Statistics.** By L. L. THURSTONE, M. E., Ph. D., Associate Professor of Psychology, University of Chicago.
- (2) **Principles and Methods of Statistics.** By ROBERT EMMETT CHADDOCK, Professor of Statistics, Columbia University.

Statistical analysis has been so generally accepted as a necessary instrument in social, psychological and psychiatric investigations, that no special plea need be made for the recognition of additional text-books. No one book can satisfy the needs of all types of students, and it is therefore an advantage to have available different approaches to the same subject.

There was a time when the psychiatrist and the social worker were interested only in the use of the "case method" as a means of research. To them statistical analysis meant a more or less rough survey which was to serve

as an introduction to an intensive study of selected cases. Fortunately this attitude is disappearing. The logical foundation of statistical method is more clearly understood, and is becoming part of the case worker's stock in trade. The social worker may find it necessary, for example, to identify an individual mentally or physically. Must he not be compared with certain norms or standards? Everyone now knows that these are nothing more nor less than statistical generalizations of our experience with mental and physical growth. On the other hand there will normally be found varying degrees of deviation from these standards or types; how is one to test their significance? These examples of the practical applications of statistical methods may be multiplied indefinitely, and illustrate the necessity of at least a passing acquaintance with the science of statistics.

Both books furnishing the subject matter of this review may be recommended to the beginner. When thoroughly understood they should prove an adequate stepping-stone to the study of still more fundamental problems in the rapidly growing field of mathematical statistics. The non-mathematically minded need not fear these books, however. Both are clearly intended for students who have long since forgotten their high school or college mathematics; and the development is so clear, especially in Professor Chad-dock's book, that it is difficult to believe a mature person will be unable to follow the texts.

Dr. Thurstone's book is directed primarily to the needs of the psychologist, and draws most of the illustrative material from the fields of mental and educational tests. It begins with a brief description of the frequency table, the column diagram, known more familiarly as a histogram, and the frequency polygon. After some chapters on the straight line and its graphic representation, the text takes up the various averages, and measures of dispersion. There then follows a discussion of the binomial expansion as applied to the laws of chance, the normal curve, and the probable error. The volume closes with chapters on the measurement of correlation by the product-moment, and rank methods.

The arrangement of the chapters merits criticism. It appears desirable to follow the discussion of the frequency table, with that on averages and measures of dispersion. These so-called statistical constants besides serving as summary descriptions of the frequency table, may be tied up with the problem of curve-fitting. This text provides only an empirical method of fitting a straight line to experimental and observational data, but the exact methods of least squares and moments are both capable of simple presentation. Furthermore the discussion of the straight line ought to be preceded by one on the scientific concept of law for the obvious purpose of fitting a mathematical curve is to aid in forecasting changes. As arranged at present the chapters on linear and non-linear curves show little relation to ordinary statistical reasoning.

The following criticisms may be made of minor points. In speaking of graphical tabulation, the author says that a frequency table is ordinarily a step in the preparation of the graph. It seems to the reviewer on the other hand, that the graph is simply a visual aid to the interpretation of the frequency table. The discussion of the straight line is made unnecessarily complicated by the failure to generalize the equation at once as an expression of the first degree. In describing the mean, the author shows, among others, what are said to be two distinct methods of deriving this constant. In reality they are one and the same, the difference being that in one case the arbitrary origin is placed at the beginning of the scale, and in the other, towards the center. There is available a very simple generalization of this method which should be introduced in the chapter on the mean. In discussing the mode the author fails to define it fundamentally as the value obtained from the generalized frequency curve by finding the position corresponding to the maximum ordinate; i. e., equating the first derivative to zero. Coming to the normal curve, the author defines it as the binominal frequency. What is clearly meant, however, is that the normal curve is the limit of the point binominal, as the value of "n" in the expression $(\frac{1}{2} + \frac{1}{2})^n$ increases without limit.

Most of these minor difficulties are avoided in Professor Chaddock's book. In common with Professor Thurstone, however, he fails to emphasize the following two points: In the first place, though both show the error in the frequency table, resulting from grouping in intervals, they do not describe the correction supplied by Sheppard. Again though both speak of the fact that the normal curve does not fit all types of frequency distributions, they nevertheless omit to describe the simple tests of "goodness of fit."

Professor Chaddock's work differs from Professor Thurstone's in several particulars. In the first place there is a very useful introduction dealing with some of the sources of error in statistical reasoning and with the logical basis of the scientific method. Secondly, the chapters follow the more logical order suggested above. In the third place, the illustrative material which was drawn for the most part from economic sources, necessitated the introduction of chapters dealing with index figures and the treatment of time series. At present these chapters will interest the economist primarily, but as social and psychological data increase in comprehensiveness, the social worker will undoubtedly desire to make comparisons over a series of years. In that event, he will have to learn how to eliminate differences that may be due to secular trends or cyclical fluctuations. Already the importance of such analysis is seen in the field of mortality and morbidity statistics. The wealth of illustration and explanatory details make this book particularly valuable to the student.

BENJAMIN MALZBERG.

ABSTRACTS OF GOVERNOR SMITH'S MESSAGES RELATING TO THE DEPARTMENT OF MENTAL HYGIENE

The deep interest of Governor Smith in the development of the State institutions for the care and treatment of the mentally afflicted is clearly manifest in his message to the State Legislature at the opening of the session of 1927. The following are abstracts from the message:

On the whole question of the care of the mentally afflicted I propose to communicate with you much more fully at a later date and at that time I will set forth the exact condition at all of the State hospitals, showing in detail improvements made as a result of the expenditure of the money received from the sale of bonds. For the purpose of this message, I will deal only with the progress made in care and prevention.

The establishment of a unified department of mental hygiene to exercise the functions of the present State Hospital Commission and State Commission for Mental Defectives and to supervise the care of epileptics is a great forward step. The State thus recognizes the fact that the institutional care of the mentally afflicted is a single problem and that progress will be facilitated by union of effort. A high standard of care of patients has already been reached by the institutions brought together in the new department, but it is believed that through free interchange of ideas the various institutions will be mutually helpful in the solution of their many problems.

The establishment of a division of prevention in the new Department of Mental Hygiene commits the State to a new policy with respect to mental defectives. Heretofore the State has provided generously for the care and treatment of the mental patients sent to institutions, but has done comparatively little to prevent the development of mental disease in the community. No one can predict the possibilities of preventive work in this field; but from the marvelous results that have been accomplished in the prevention of physical disease, we may confidently hope that the influx of patients in the State hospitals may be checked and that the heavy burden thereby imposed on the people of the State may be lessened.

Judging from the experience gained in the prevention of physical diseases, three major lines of activity are indicated in the field of mental hygiene. Research work should be conducted on a more comprehensive scale. Preparations to do this are being made by the erection of a large Psychiatric Institute and Hospital to form a part of the new Medical Center in New York City. Now that this main institution of the State Hospital system in New York City is about to take form, I would recommend the development of one or more similar institutions of smaller size in strategic centers up-State, particularly in cities where medical schools are located. Last winter I approved a bill which authorized the construction of a State

Psychiatric Hospital in Syracuse in connection with the University Medical Center there, as soon as funds are available for construction. I urge that an appropriation for the construction of this institution be made available this winter in order that an up-State center for early treatment and teaching purposes may shortly follow that in New York City. The studies carried on in these centers should be supplemented by field work and by researches in the State hospitals and other institutions. The field is broad and research work therein difficult; but every means must be taken to discover more effectual methods of relieving the mentally afflicted and of preventing the development of mental disorders.

The clinics conducted by the State hospitals for the early treatment of persons suffering from mild nervous and mental disorders, and to aid in the adjustment to community life of paroled and discharged patients, have proved of great value, and should be extended so as to become more effective preventive agencies. Thus far, the clinics have dealt principally with adults. Children manifesting marked behavior disorders should also be reached. This could best be done by the establishment of permanent child guidance clinics in the principal cities of the State.

Marked progress has been made in the development of occupational treatment of patients in the State hospitals. At the close of the fiscal year the number of patients receiving occupational therapy in special classes was 11,379, as compared with 9,848 at the end of the previous year. This treatment which is conducted by trained occupational therapists and physical instructors under the supervision of the medical staff, is proving of inestimable benefit to the patients.

Through the joint efforts of the State hospitals and the Medical Examiner's Office, 458 alien and 758 non-resident insane patients were removed from the State during the past fiscal year. This was the largest number removed in any one year since 1914. In view of the crowded condition of our State hospitals and the high cost of new buildings and of maintenance the removal of these patients, who have no claim on the bounty of the State, helps to alleviate these conditions.

One matter which does not come under the bond issue is the annual appropriation for improved fire protection for these institutions which has been made for the past three years. I recommend that it be continued. Through the construction of fire walls, fire exits, fire escapes and sprinkler systems and the installation of new fire alarm systems, much has been accomplished to safeguard patients necessarily cared for in non-fireproof buildings. Although conditions with respect to the protection of patients from fire hazards are now better than ever before, much still remains to be done, and it is believed that the policy of doing a reasonable amount of this work each year until it is completed should be continued.

Provision should be made for the wide dissemination among the people of the State of information relating to the nature and causes of mental disease and to methods of prevention. It is believed that a more general knowledge of the facts and principles of mental hygiene now available would result in marked reduction of the cases committed to State hospitals. Probably a more highly developed system of preventive work in mental hygiene will aid also in the prevention of crime.

SECOND MESSAGE

On January 24, 1927, Governor Smith sent a message to the Legislature explaining the disposition made of moneys from the \$50,000,000 bond issue for hospitals and charitable institutions and from the first \$10,000,000 of the \$100,000,000 issue for public improvements. In this message he recommended that authorization be made for the purchase of an additional site for a State hospital to serve the metropolitan district; also that the \$900,000 appropriated in 1926 for further development at Newark be reappropriated for the construction of industrial and farm buildings and housing for a new Syracuse State School to be constructed on lands now owned by the State just beyond the city limits.

The Governor set forth in the message a full history of the allotments so far made from the \$50,000,000 bond issue and showed the progress of the work up to the present time. The following statement is quoted directly from the message:

The first \$12,500,000 from the \$50,000,000 bond issue was appropriated in a lump sum to be allotted to projects to be approved by the Board of Estimate and Control. The following is the history:

Brooklyn State Hospital—Creedmoor Division..... \$3,400,000

This appropriation gave us 15 buildings providing 1,135 patient beds. This work is more than two-third completed and will be finished and ready for occupancy not later than June 1, 1927.

Harlem Valley State Hospital..... 2,570,000

This money was for the erection of buildings for both patients and employees and provided 800 patient beds. This work is now five-eighths completed and some of the buildings are about ready for occupancy.

Kings Park State Hospital..... 1,930,000

This money provided 17 buildings for the Veterans' Memorial Hospital and also a new power house. This amount was added to a previous appropriation making the total for this purpose \$3,430,000. This project is almost completed and will be ready for occupancy in March, 1927. The power house was completed and put into use in March, 1926.

Letchworth Village..... \$1,812,500

This was to provide new patient and employee buildings at Letchworth Village for the feeble-minded. In the patient buildings the last coat of paint is being applied and they will be ready for occupancy this month. The other buildings will be completed in March of this year.

Matteawan State Hospital..... 1,000,000

This money provided additional patient accommodations in the amount of 536 beds. The work is nearly completed and buildings will be ready for occupancy in March, 1927.

Hospital for Crippled Children at West Haverstraw..... 295,000

This money provided patient and employee buildings and 216 additional patient beds. The allotment, however, was found to be insufficient and it will be reported on definitely in the history of the next allotment.

Craig Colony..... 215,000

Craig Colony is an institution for the care of epileptics. This money was spent for new service lines which were completed in March, 1925; also a new addition to the hospital which was completed in February, 1926.

Manhattan State Hospital..... 60,000

This money was used for the erection of a building as headquarters for the medical staff. There was some delay in this due to the fact that the proposals were rejected because they were believed to be excessive. The work is now going on and is about one-quarter completed.

Central Islip State Hospital..... 16,000

This money was used for the erection of an employees' building. The work was completed in November, 1926, and the building is now occupied.

The second \$12,500,000 authorized from the \$50,000,000 bond issue was also appropriated in a lump sum to be allotted for projects to be approved by the Board of Estimate and Control. The following is a history of the projects approved and their present status:

Harlem Valley State Hospital..... \$ 740,000

This money was used for buildings for patients and employees, and for utilities such as sewage disposal, light, heat and power. The work is three-quarters completed and the buildings will be in use in April, 1927.

Psychiatric Institute and Hospital at New York City..... \$1,600,000

This is to provide an institute for study and research in New York's new medical center. A contract for excavation and for sewer and water connections was awarded in June, 1926. This work is now completed. The contract for the building itself has been awarded and it will be completed in April, 1928.

Rockland State Hospital..... 8,000,000

This is only a part of the cost of the new Rockland State Hospital. Its ultimate cost will be about \$11,000,000. This seems to be a great deal of money, but it must be remembered that the hospitals for the insane are not erected within cities, and when you figure a patient population of 3,500 and allow for 1,500 employees made up of doctors, nurses, attendants, mechanics, etc., you are really setting up a good sized village. Not only must the State provide the buildings, but full provision must be made for sewage disposal, water supply, and underground connections, for light, heat and power and for other services to a large group of buildings. Proposals for this work will be received in March, 1927.

Rochester State Hospital..... 1,250,000

This is to provide new buildings for patients. These buildings will be identical with those to be erected at Rockland State Hospital. The project has been held back awaiting the completion of the Rockland drawings. Bids on the work will be received in May, 1927.

Newark State School for Mental Defectives..... 145,000

This is to provide a new laundry building. The drawings and specifications are finished. Bids will be received in April, 1927. There is no advantage in bidding work in this part of the State before the spring.

Rome State School for Mental Defectives..... 60,000

This money is to provide an addition to the present laundry. Bids will be received in May, 1927.

Craig Colony..... 495,000

This money is to provide patient and employee accommodations. The drawings and specifications have been finished for some time, and bids are scheduled for receipt in March so that the work may be started within a reasonable time after the contract is awarded.

Wassaic State School for Mental Defectives..... \$ 450,000

This is an entirely new institution designed to serve the needs of the Metropolitan district. The purpose of the small allotment was to construct dormitory buildings in which able-bodied inmates might be housed and used in preliminary work of clearing up the site. The project is under way and will be definitely reported on in the next allotment.

Hospital for Crippled Children at West Haverstraw..... 240,000

The first allotment to this hospital was inadequate and in 1925 an additional \$240,000 was allotted. The work is about one-half completed and the new buildings will be ready for occupancy in the late summer of 1927.

The third \$12,500,000 from the \$50,000,000 bond issue was authorized in 1926 and was appropriated in line item form by the Legislature. The following projects were authorized and I will give a brief statement describing the progress made:

Binghamton State Hospital..... \$ 325,000

This money was to provide a cold storage warehouse at a cost of \$200,000 and accommodations for employees and staff quarters at a cost of \$125,000. The bids on the cold storage warehouse are scheduled for receipt in June, 1927, and the bids on the staff quarters will be received in May, 1927. The amount remaining for employees' accommodations is inadequate and I will recommend additional allotment out of the 1927 allotment.

Buffalo State Hospital..... 310,000

This money was for the erection of a new dining room, a new wing to the kitchen, and an addition to the reception building. A contract has been awarded for the reception building addition and the work is well under way. Bids on the kitchen and dining room will be received in June, 1927.

Gowanda State Hospital..... 295,000

This money is to provide patient and employee accommodations. The drawings and specifications are completed. Bids for the buildings for the patients will be received in March, 1927, and the building for the employees in April, 1927.

Harlem Valley State Hospital..... 95,000

\$50,000 of this sum was allotted for quarters for the medical staff leaving only \$45,000 for employee accommodations,

an amount totally inadequate to meet the accommodations required. The fact is that the wording of the appropriation was in error. Bids on the staff accommodations will be asked immediately and the remaining \$45,000 will have to be supplemented this year under a properly worded bill.

Hudson River State Hospital..... \$ 600,000

This is to provide a new power plant. The drawings and specifications are nearing completion and bids will be asked for in June, 1927.

Manhattan State Hospital..... 175,000

This money is to provide a building for the dining hall and suitable buildings for providing facilities for hydrotherapeutic treatment of the acutely disturbed. The new dining room building will make possible the abandonment of the disgraceful basement dining room in the so-called annex. The facilities for hydrotherapy have been lacking for years.

Rochester State Hospital..... 90,000

This money is to provide a new dormitory building at the Lakeside Farm. The bids will be received for it in May, 1927.

St. Lawrence State Hospital..... 400,000

This money is to be used for new buildings for a reception hospital and staff accommodations. St. Lawrence State Hospital has never had a building to house the reception service. The drawings and specifications for the staff headquarters are completed and bids will be received immediately. Bids will be received for the reception hospital in June, 1927.

Utica State Hospital—Marey Division..... 4,000,000

This hospital was started about 10 years ago and under the old pay-as-you-go policy progress in its development was very slow. The buildings proposed to be constructed from this money will be identical with those planned for the new hospital in Rockland County. Bids on the work are scheduled for receipt in April, 1927.

Willard State Hospital..... 425,000

This money is intended for the construction of new houses for attendants and nurses. It must be borne in mind that when new quarters are found for attendants and nurses there

is released a corresponding number of beds for new patients. The drawings for these buildings are completed and the bids are scheduled for receipt in April, 1927.

Thomas Indian School..... \$ 200,000

This money is for the construction of a new dormitory building. Bids on this work are scheduled to be received in July, 1927.

Newark State School for Mental Defectives..... 900,000

The start of work on this project has been postponed from time to time pending the settlement of the question as to whether this money should be spent at Newark or be devoted to a new institution at Syracuse. I have already presented this matter to you in a preceding part of this communication.

Rome State School for Mental Defectives..... 450,000

This money is for a new dormitory building and underground connections. The drawings and specifications have been finished for some time, but the taking of bids has been delayed by reason of the climate in this part of the State. Nothing could be accomplished in the fall. Therefore, bids on this work will be received early in March, 1927.

Craig Colony..... 450,000

This money added to previous appropriations for Craig Colony brings the total up to \$1,200,000. This will not provide all of the new construction that is urgently needed at Craig Colony, but it goes a long way toward relieving the critical condition existing in that institution in 1923. Bids on the last installment of the work will be received in July, 1927.

Letchworth Village..... 1,185,000

This appropriation together with allotments made in two preceding years gives to Letchworth Village the total amount on new construction allocated to it in the completed program. This money is for additional buildings and underground connections. The drawings and specifications have been finished for several months. The taking of bids was delayed until spring. Bids will be received in March, 1927.

Wassaic State School..... 2,600,000

This money added to the appropriation of the previous year makes available \$3,000,000 for construction. Bids on

all of the work which available funds will pay for will be received in May, 1927.

This is the story up to date of the allotment of 75 per cent of the \$50,000,000 bond issue authorized in 1923 for new hospital buildings and for new construction in the charitable institutions.

The allotments from the public works bond issue of 1925 so far as they relate to institutions in the Department of Mental Hygiene are set forth in the message as follows:

Matteawan State Hospital..... \$ 750,000

This is for the erection of a new power house to care for the old buildings and the new construction spoken of in another part of this message. The drawings and specifications have been completed and bids are scheduled for receipt early in March of this year. The new power house will be in operation before next winter.

Brooklyn State Hospital—Creedmoor Division..... 150,000

For a laundry building. Bids on this work will be received in June, 1927.

Harlem Valley State Hospital..... 30,000

This money was used to purchase additional farm lands and they are now in use.

Brooklyn State Hospital—Creedmoor Division..... 250,000

This money was used to purchase additional land. The land has been acquired.

Newark State School for Mental Defectives..... 15,000

This money was for the purchase of additional land. It has been acquired.

Syracuse State School for Mental Defectives..... 65,000

This money was for the purchase of additional lands outside the city of Syracuse for farm colony purposes. The land has been acquired.

Napanoch State Institution..... 15,000

This money was for the purchase of additional lands. The State has acquired them.

CONTRACTS AWARDED FOR NEW PSYCHIATRIC INSTITUTE AND HOSPITAL

The State Hospital Commission on December 30, 1926, awarded contracts for the construction of the new State Psychiatric Institute and Hospital on a site provided by Columbia University at its new Medical Center at 168th Street and Riverside Drive, New York City. This act was the culmination of the work of several years of hoping and planning on the part of the Commission. The awards were as follows:

Construction, Guidone & Bottino, Inc., New York City, \$1,291,472; heating, E. Rutzler, New York City, \$158,315; sanitary, Patrick F. Kenny Sons, New York City, \$139,898; electric, Walter H. Taverner Corporation, New York City, \$68,700; elevators, Otis Elevator Company, New York City, \$71,485.

Plans and specifications for the institution were prepared by State Architect Sullivan W. Jones. The excavation, which was provided for under a separate contract some months ago, has already been completed. The contracts call for the completion of the work by April 1, 1928.

Commenting on the significance of the new institution, Commissioner Parsons states:

"It marks a new era in the scientific care and treatment of mental disorders and of research into their causes, which it is hoped will eventually result in the prevention of a substantial amount of mental disorder, and cut down the enormous bill which the State pays yearly for the care of the insane."

Newspapers throughout the State, in both news and editorial columns, gave generously of their space to announce the award of contracts and to comment on the significance of this proposed notable addition to the Medical Center of Columbia University. The New York Sun said editorially on January 22: "In this new institution the causes and means of prevention of mental illnesses will be studied and specialists in the treatment of these disorders will be instructed under the most advanced conditions. Children and adults will be treated, and the modern doctrine of prevention will be preached from its class rooms, its wards and its out-patient department. The false notion that an upset mind is more disgraceful than an upset stomach, that jangling nerves should be concealed where a broken arm would be revealed, will be combated with all the authority science supported by common sense and experience can command."

The New York Telegram said editorially: "The Psychiatric Institute is bound to play a considerable part in the promotion of medical studies that are yet only in their infancy."

NOTES

Dr. Frederick W. Parsons was appointed Commissioner of Mental Hygiene by Governor Smith on January 17, 1927. Dr. Parsons was superintendent of the Buffalo State Hospital from April 1, 1919 to July 1, 1926, when he became chairman of the State Hospital Commission, succeeding Dr. C. Floyd Haviland, resigned. His new appointment is virtually a re-appointment although the powers, duties and responsibilities of the Commissioner of Mental Hygiene are much greater than those of his former position.

Dr. Parsons' appointment was confirmed by the Senate on February 2, 1927.

Dr. Horatio M. Pollock, director of the Statistical Bureau, Department of Mental Hygiene, has been reappointed chairman of the Committee on Institutional Statistics of the American Statistical Association. The other members of the committee are: Kate H. Claghorn, Edith M. Furbush and Dr. Joseph A. Hill.

Dr. Rodney R. Williams, formerly first assistant physician of the Hudson River State Hospital and more recently director of the Memphis Child Guidance Clinic, has accepted the position of psychiatrist at the Children's Village, Dobbs Ferry, New York. He assumed the duties of the new position January 1, 1927.

A permanent child guidance clinic has been organized in the city of Cleveland to take place of the demonstration clinic, conducted under the direction of Dr. Lowrey. Dr. H. C. Schumacher becomes director of the new organization. He will be assisted by Dr. E. S. Rademacher, psychiatrist; Miss Grace O'Brien, psychologist; Miss Frederika Neumann, chief of social service; Miss Mina Sessions, supervisor, and Miss Grace Dicks, social case worker.

Mrs. Eleanor C. Slagle, director of occupational therapy, Department of Mental Hygiene, has been given a trip to Europe as a token of affection and esteem by the members of the American Occupational Therapy Association. The gift in the form of an order on Thomas B. Cook & Son amounting to \$1,100, was presented to Mrs. Slagle at Christmas time by Mrs. Frederick W. Rockwell of Philadelphia, a member of the Board of Managers of the American Occupational Therapy Association. Mrs. Slagle was one of the organizers of the American Occupational Therapy Association and has served the Association as president for one year and as secretary and treasurer for several years. She will sail for Europe February 23, 1927.

The Civil Service Commission has announced unwritten examinations for the following important positions in the new State Department of Mental Hygiene:

Assistant Commissioner, Division of Mental Diseases. Salary probably \$9,000. Candidates must be well educated physicians, graduates of a satisfactory medical college and must have had at least 10 years' experience in the institutional care and treatment of the insane. Experience in departmental control of hospitals for the insane may be substituted year for year not to exceed one-half of the required experience in institutions. The examination is open to residents and non-residents of New York State who are licensed to practice medicine in New York State or eligible for a license.

Assistant Commissioner, Division of Prevention. Salary probably \$9,000. Candidates must be well educated physicians, graduates of a satisfactory medical college and must have had 10 years of satisfactory experience in the care and treatment of mental disease and defect of which three years must have been in mental community supervision or mental clinics or both. Examination is open to residents and non-residents of New York State who are licensed to practice medicine in New York State or are eligible for license.

Assistant Psychiatrist, Division of Mental Deficiency and Epileptic Diseases. Salary \$4,500. Candidates must be graduates of a recognized medical college, must be registered or eligible for registration in New York State, and must have had at least four years of acceptable experience in the practice of medicine subsequent to graduation, including at least one year in psychiatric work in the examination and care of mental defectives or those suffering from mental diseases. Credit will be given for medical work in examining children both from physical and mental standpoint and for attendance at children's clinics. The examination is open to residents and to non-residents of New York State, and also to non-citizens.

Applications for these positions must be filed in the office of the State Civil Service Commission by February 19, 1927. No written tests will be required but rating will be made on training, experience and personal qualifications.

Dr. Herman M. Adler, Director of the Institute for Juvenile Research, Chicago, Ill., has announced the following appointments to the Behavior Research Staff, made possible by the Behavior Research Fund which has been provided by public subscription for a period of five years through the efforts of the Friends of the Institute for Juvenile Research: Herman M. Adler, M. D., director; Horace Gray, M. D., of Boston, Mass., endocrinologist; Professor Gustav A. Jaederholm, Ph. D., of the University of Gothenburg, Sweden, research psychologist; Ethel Kavin, M. A., research psychologist; Professor K. S. Lashlay, Ph. D., of the University of Minnesota, research psychologist (Comparative Psychology); Professor L. L. Thurstone, Ph. D., of the University of Chicago, research psychologist; Claude Shaw, Ph. D., of the University of Chicago, research sociologist; and John C. Weigel, administrator. In making the announcement Dr. Adler said, "The scientific study of human behavior must and will yield not only new methods both for the treatment and prevention of delinquency and crime, but will also produce new knowledge about the human mind that will add to the sum total of human happiness."